

Manufacturers Record

Exponent of America

AUGUST 12, 1920.

Volume LXXVIII

Table of Contents

Number 7

Senator Harding's Praise of and Pledge to the South.....Cover Page

EDITORIALS.....89 - 106

Killing Off Production by Killing Credit.
Are We Altruistic Enough to Go to Poland's Rescue?
Report of Federal Reserve Board of Vital Interest to
Cotton Producers and Consumers.
How to Increase Railroad Efficiency to the Good of
All Interests.
How the World Missed a Real Peace.
Business Conditions and the Building Situation.
Governor Cox Favors the League, but Wants it Sugar-
Coated.
Increased Efficiency Only Solution of Present Economic
Conditions and Problems of Unrest.

Modernize and Equip All Business Interests with
Improved Machinery and Appliances as a Partial
Solution of the Labor Problem.
The South's Educational Standing Compared with
Other Sections.
The Funding of Our Foreign and Domestic Loans.
The Liquor Traffic in the Political Campaign.
France as an Example to Americans.
Where America and the Allies Blundered.
How to Carry Forward the "Open-Shop" Campaign.
The Break in Texas Cottonseed Market Due to Break
in Prices of Oil-Mill Products and Heavy Importa-
tions from Orient.

NEWS ARTICLES

Senator Harding Praises Southern Achievements and Pledges Broad Americanism in Relation to South's
Development.....By Albert Phenix 91
Cotton Crop, Including Seed, for 1919-1920 Valued at \$2,516,544,520.....By Col. Henry G. Hester 107
Cotton Hit by Federal Reserve Board.....By W. B. Thompson 111
World's Greatest Grain Handling Center.....By Edward Jerome Dies 113
Southern Railway Co. Will Have Elaborate Exhibit at Exposition of Chemical Industries.....114
Sugar-Making in the Everglades.....114
The \$10,000,000 London Commercial Enterprise of Mr. Irving T. Bush.....By Thomas H. Uzzell 115
Big Irrigation Projects for Louisiana Lands.....By Welman Bradford 117
Progress of the Open Shop in West Virginia Coal-Mining Operations.....118
Recent Gas Developments in the Plains Country.....119
Burkburnett Field Still a Good Producer.....120
Large Reclamation Work Continues in Delta Region.....121
Texas City Sold to Chicago Interests.....121
The Monongahela River Now Safeguards Pittsburgh's Industries.....122
Chesapeake Iron Works Doubles Capacity of Its Structural Steel Plant.....123
The Railroad Rate Advance as It Affects Southern Roads.....124
Increased Transportation by Water of Pennsylvania Coal and Better Car Facilities by Rail.....129

DEPARTMENTS

| | | | |
|--|-----|---------------------------------|-----|
| News and Views from Our Readers..... | 126 | Mechanical..... | 133 |
| The Iron and Steel Situation..... | 127 | Foreign..... | 133 |
| Good Roads and Streets..... | 130 | Construction News..... | 134 |
| Railroads..... | 131 | Industrial News..... | 150 |
| Textile..... | 132 | New Financial Corporations..... | 152 |
| Commendations, Kicks and Comments..... | 132 | New Securities..... | 152 |

PUBLISHED EVERY THURSDAY BY THE

MANUFACTURERS RECORD PUBLISHING CO., BALTIMORE, MD.

Branch Offices: New York, 30 Church St.; Chicago, 11 South La Salle St.; Boston, 734 Old South Bldg.; St. Louis, 915 Olive St.
Washington, Whaley-Eaton Service, 456-459 Munsey Building.

SUBSCRIPTION RATES

\$6.50 a year (in advance); six months, \$3.50; three months, \$2.00 to United States, Mexico, Cuba, Porto Rico, Hawaii and the
Philippines. For Canada, add postage \$2 a year. For other foreign countries, add postage \$5.50 a year.
Back numbers, if available and not over one month old, 20 cents each. From one month to six months old, 30 cents each; over
six months old, \$1 each.
In ordering change of address, give old as well as new address.

MEMBER ASSOCIATED BUSINESS PAPERS, INC., AND AUDIT BUREAU OF CIRCULATIONS.

NORTHROP LOOMS

TRADE-MARK

Make better goods and more of them with less than half the labor cost of weaving.

Draper Corporation
Hopedale, Massachusetts

PROTECT YOUR INCOME AT THE SOURCE

Stop Pay Roll Leaks with
SIMPLEX TIME RECORDER

Prevent Fires with
HARDINGE WATCHMAN'S CLOCK

Write for FREE BOOKS

L. P. LATHEM

527 Candler Bldg. - - ATLANTA, GA.

B. & B. WIRE ROPE

Safe and sound all the way through. You can depend upon it absolutely and always.

Broderick & Bascom Rope Co.
ST. LOUIS, MO.

Mfrs. of Celebrated Yellow
Strand Wire Rope



PROTECT YOUR INCOME AT THE SOURCE

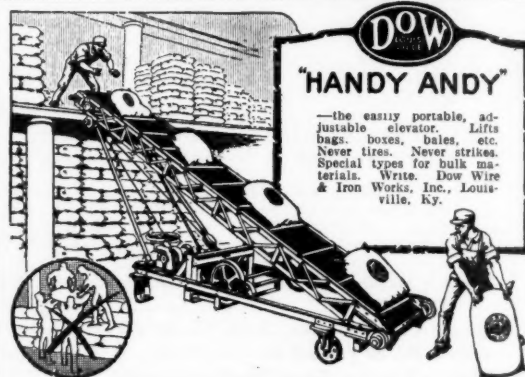
Stop Pay Roll Leaks with
SIMPLEX TIME RECORDER

Prevent Fires with
HARDINGE WATCHMAN'S CLOCK

Write for FREE BOOKS

L. P. LATHEM

527 Candler Bldg. - - ATLANTA, GA.



DUXBAK
Waterproof
Leather
Belting



Chas. A. Schieren Company
ESTABLISHED 1868
Tanners and
Belt Manufacturer

26 FERRY ST., NEW YORK

Always Leads in Tests of
Quality, Endurance and Satisfactory Service

MACWHYTE Wire Rope

Is Good Wire Rope

MACWHYTE COMPANY, Kenosha, Wis.

"Formerly known as Macomber & Whyte Rope Company"

Southern Office and Warehouse: 1722 Avenue B, Birmingham, Ala.
Other Offices and Warehouses: New York, Chicago, Pittsburgh,
Portland, Tulsa. Distributors in All Principal Cities



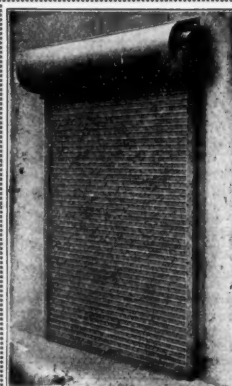
NICHOLSON FILES

The Files that cut the Smoothest—a File for every purpose.

Send for File Philosophy—a fifty years' Education in Files and Filing in one hour.

NICHOLSON FILE CO.

Providence, Rhode Island, U. S. A.



KINNEAR ROLLING AND BIFOLDING DOORS

— OF —

STEEL AND WOOD

Complete Labeled Service

Our engineering Dept. will submit plans and specifications. Write today for catalogue

THE KINNEAR MFG. CO.

823-873 Field Ave.

COLUMBUS, OHIO, U. S. A.

Manufacturers Record

EXPONENT OF AMERICA

Devoted to the Upbuilding of the Nation Through the Development
of the South and Southwest as the Nation's Greatest Material Asset

Trade-Name Registered in the U. S. Patent Office

VOL. LXXVIII, No. 7
WEEKLY

BALTIMORE, AUGUST 12, 1920

{ SINGLE COPIES, 20 CENTS.
\$6.50 A YEAR

PUBLISHED EVERY THURSDAY BY THE
MANUFACTURERS RECORD PUBLISHING CO.

Office: Manufacturers Record Building, Cor. Commerce and Water Sts.
BALTIMORE, MARYLAND

RICHARD H. EDMONDS, President VICTOR H. POWER, Treasurer
FRANK GOULD, Vice-President I. S. FIELD, Secretary

RICHARD H. EDMONDS, Editor

BRANCH OFFICES:

CHICAGO, 11 So. La Salle St.
ST. LOUIS, 915 Olive St.
WASHINGTON (Whaley-Eaton Service), 456-459 Munsey Bldg.

NEW YORK, 30 Church St.
BOSTON, 734 Old South Bldg.

SUBSCRIPTION RATES:

\$6.50 a year (in advance); six months, \$3.50; three months, \$2 to United States, Mexico, Cuba, Porto Rico, Hawaii and the Philippines. For Canada, add postage \$2 a year. For other foreign countries add postage \$5.50 a year. Back numbers, if available and not over one month old, 20 cents each. From one month to six months old, 50 cents each; over six months old, \$1 each. In ordering change of address, give old as well as new address.

[Entered at the Baltimore Postoffice as second-class matter.]

In order to avoid delays all correspondence pertaining to news or advertising matters should be addressed directly to the Manufacturers Record, Baltimore, Md., and not to individual editors, officers, employees or any branch office.

KILLING OFF PRODUCTION BY KILLING CREDIT.

THE enthusiasm of some Washington officials over the break in prices of farm products and cotton and grain, as well as livestock, only illustrates the narrowness of vision of the men who are largely responsible for bringing about this condition. A breakdown of prices for foodstuffs may bring temporarily lower prices to the consumer, but the ultimate result will be a scarcity which will ultimately make the prices of the last year or two seem very low.

We have repeatedly pointed to the certainty of a decreased production following any serious decline in the prices paid to producers, and have shown how the break in the prices of livestock would lessen the supply of meats in the near future. Discussing this situation, the Shoe and Leather Reporter of Boston, emphasizing how the shortage in credit is forcing livestock on the market which should be kept for breeding purposes, says:

"We print this week another article relating to the critical cattle situation. One of the many perplexities developed by the war is the abnormal slaughter of cattle and the peculiar conditions which are making it practically impossible for livestock men to continue breeding cattle. The banks which for years have specialized on cattle loans have shortened their lines of credit, and bees are being rushed to market when they should go to the feed lots for fattening. This causes more hides for the time being, but the ultimate outlook is threatening."

This is but another case where the curtailment of credit by banks means not only temporary losses running into the millions and hundreds of millions on the part of the producers, but it means a condition which will eventually add enormously to the cost of foodstuffs. Under the dominating power of the Federal Reserve Board member banks have been curtailing credit, and the result is that cattlemen have been rushing their livestock to the market regardless of prices and without regard to the future supply which the country will need. Liquidation of that sort bodes ill for the future.

ARE WE ALTRUISTIC ENOUGH TO GO TO POLAND'S RESCUE?

IN the volume entitled "The Triumph of Ideals," containing the speeches and addresses made by President Wilson at the Peace Conference, the following statement appears as part of his address delivered at Paris, May 10, 1919, under the heading "America Is Ready":

"The President asserted that the American people who came into the world consecrated to liberty were ready to cast in their lot in common with the lot of those whose liberty is threatened wherever the cause of liberty seemed to be imperiled."

"This," added Mr. Wilson, "is the spirit of the people of the United States, and they have been privileged to send two million men over here to tell you so."

In his address at the Mechanics' Hall at Boston on his return from the Peace Conference Mr. Wilson said:

"Do you realize how many nations are going to be set up in the presence of old and powerful nations in Europe and left there if left by us, without a disinterested friend?"

"Do you believe in the Polish cause as I do? Are you going to set up Poland, immature, inexperienced, as yet unorganized, and leave her with a circle of armies around her?"

"The arrangements of the present peace cannot stand a generation unless they are guaranteed by the united forces of the civilized world."

Among the conditions of peace stated by the President in his address to Congress on January 8, 1918, was the following:

"An independent Polish state should be erected which should include the territories inhabited by indisputably Polish populations, which should be assured a free and secure access to the sea and whose political and economic independence and territorial integrity should be guaranteed by international covenant."

In these addresses and many others President Wilson committed himself absolutely to safeguard the liberties of the world wherever liberty was imperiled. In effect, he said in the Paris speech which we have quoted that wherever liberty was endangered the people of America would rush to the rescue and cast in their lot with those whose liberty was in danger. At other times he specifically pointed out the situation as to Poland, and asserted that Poland must be protected and safeguarded against the dangers of the armies which have encircled her.

Poland is now in danger. Liberty is imperiled in the case of Poland. That country is making a heroic fight against the

Bolshevists whom we have helped to warm into life by permitting Trotsky to leave this country for the purpose of developing Bolshevism in Russia, endangering the very existence of Poland, and in doing this endangering the civilization of Europe, and, many believe, the civilization of the world, for it is a well-known fact that Bolshevism is carrying on propaganda throughout the entire world in civilized and uncivilized lands.

Poland bares its breast to the struggle; it fights against overwhelming odds; it stands between the Red Army of Russia, with all of its fearful crimes, destroying civilization wherever it marches, and the safety of Europe, and perchance the safety of America.

What is our duty? Have we the spirit of altruism of which so many Americans boasted because we entered the struggle in France, or were we then, as President Wilson said, forced into the war to save ourselves and our own self-respect, since Germany was making war upon us, sinking our ships and murdering our people? So long as Belgium and France and England and Italy stood in the position in which Poland now stands, and so long as we could possibly keep out of war without realizing that if they were destroyed our doom would be settled, we held aloof from the World War.

What is our duty to Poland? Shall we rush to the struggle with armies and with money? Some Baltimore men have recently asked the President to offer "our moral support" to Poland, but moral support counts for nothing as against the rush of the Red Army. The only thing that barbarians of that kind understand is force, force to the utmost limit, force beyond their power. They care not for moral support. They only recognize the power of mighty explosives and of armies greater than theirs.

And then if we are to go to the rescue of Poland and the liberty which has been imperiled, shall we depend upon volunteers, or shall we conscript the soldiers who must be sent to fight the battles of Poland as against Bolshevism? When we conscripted men for the war against Germany it was upon the definite basis that Germany was making war upon us; that Germany was destroying our munition factories, sowing the seeds of discontent here, striving to enlist Mexico and Japan in a war against us, murdering our people upon the high seas and demanding that our shipping should be absolutely subservient to the orders of Germany. And yet many dared to claim altruism as our reason for going to war. We fought then with a conscripted army, in part, for not enough volunteers could be had, in order to save the life of this nation, then desperately menaced. The same conditions do not in the same way apply to Poland, and yet Poland may, as many believe, stand today between world-wide Bolshevistic chaos and civilization. The Bolshevists are making no war against the United States as Germany was. They are not murdering our people; they are not sinking our ships; they are not blowing up our munition plants, but they are seeking to undermine all governments on earth and let the rule of chaos ruin the world.

If American soldiers must be sent to meet the situation, how many mothers and fathers are willing that their sons should be conscripted for the task? How many American soldiers who fought on the battlefields of France or those

who did not get there would be ready to volunteer for the service? These are questions which the American people must answer. No movement of importance can be made except through a special session of Congress. Will President Wilson call Congress into session for this purpose? He has said that the American people, consecrated to liberty, will cast in their lot wherever liberty is threatened. Is this true? Today liberty is tremendously threatened in Poland, and once more would be heard the cry that "Liberty shrieked" when Poland fell.

It is fortunate indeed that we are not members of the League of Nations without reservations, for if we were, it would be entirely feasible and proper for the League Council to order us to the extent of our ability in men and money to send our armies into Poland, and we would be compelled to do so or violate a moral obligation which we had assumed in entering the League on that basis. It is a very poor excuse to say that under the constitution this Government cannot enter upon war except by the action of Congress, for if with our eyes wide open and with a full knowledge of the situation we had accepted the League of Nations without reservations, we would have committed ourselves morally, which President Wilson said has more binding force than a legal obligation, to enter at once upon war when so ordered by the League of Nations, in which we would have one vote out of nine. We may rest assured that England and France and Italy and Belgium and the other countries in the League, feeling that the burden of defending Poland should be thrown upon us, would before this have voted for us to furnish our full quota of men and money, and, in this vote the American representative, answerable only to the President, might have acquiesced. The vote for or against war would have been cast in a foreign city, in a foreign council, without the intervention, instruction or even the knowledge of the American Congress or the American people. They would have hung anxiously at the end of the cables for news as to whether the country was being dedicated to war or to peace. For we would have been false to our moral contract if we had failed to heed the council's orders, and would have incurred the undying hostility of the world for having treated our contract as "a scrap of paper." As the matter stands today we are absolutely independent to act as Congress may decide, and the American people can voice their sentiments through Congress as to whether we shall follow Mr. Wilson's promise to rush wherever liberty is imperiled and, if need be, to make the "supreme sacrifice" in order to safeguard other countries.

What shall be the answer of America to the issue thus raised in this crisis of world importance?

NEED FOR HIGH PRICES FOR FARM PRODUCTS.

WRITING from Leander, Tex., Mr. T. L. Allen, president of the Cedar Park Stone Co., in referring to the difficulties of securing farm labor in that section, says:

"We have been a subscriber to the MANUFACTURERS RECORD for some years, and are in sympathy with you on most of your editorials, especially the ones referring to the impending food shortage, which is sure to come unless something is done to make it more profitable to stay on the farm. The recent oil developments, as well as other enterprises that pay high wages, have taken all the laborers from the farm, so that farmers in this district find it almost impossible to get their crop harvested. Keep up your good work by encouraging higher prices for farm products, so that farm production may be increased and the tide turned 'From farm to city' to 'From city to farm.'"

Senator Harding Praises Southern Achievements and Pledges Broad Americanism in Relation to South's Development

WANTS TO FEEL, IF ELECTED, THAT HE IS THE PRESIDENT OF A UNITED COUNTRY, KNOWING SECTIONAL LINES ONLY AS GEOGRAPHICAL DIVISIONS—REGARDS DEVELOPMENT OF SOUTH'S WONDERFUL RESOURCES, TO WHICH HE PLEDGES HIS FULLEST CO-OPERATION, AS NECESSARY TO WELL-ROUNDED NATIONAL ADVANCEMENT.

[Special to Manufacturers Record.]

Marion, Ohio, August 7.

[Declaring that he would be President of the entire country if elected in November, Senator Harding today expressed his great appreciation of the opportunity to convey through the Manufacturers Record a message of good-will to the people of the South. He would know no sectional lines, he declared, and the South would not be different from other sections, except by way of geographical distinctions. He praised the great achievements of the South, made full appraisal of its wealth of natural resources and its value as a national asset on most diversified lines. The need of the South for a protective tariff was especially stressed, without which various important Southern industries could not possibly thrive or even live.

Each statement as herewith given was carefully weighed by Senator Harding, and is thus a valuable presentation of his views on matters particularly relating to the South. Therefore, this special message to the South will unquestionably be received with the greatest interest by readers of the Manufacturers Record everywhere, North as well as South.—Albert Phenix.]

By SENATOR WARREN G. HARDING.

"If elected, it will be my aim to the utmost extent of my ability to know neither North nor South, East or West, except as to geographical divisions. I believe the time has passed when there should be any feeling of sectionalism anywhere in this country, and I trust that I may be to some extent instrumental in bringing into closer touch and harmony of sentiment all sections of the country.

"It was once said during President McKinley's administration that for the first time in many years the policies which were good for one section were good for all sections, because the industrial development of the South had reached a point where the people of that section could discuss the great economic issues of the hour from the same standpoint as those which might influence the people of New England or of the West. That situation has continued to grow. The amazing material progress of the South is shown in the fact that Southern mills are now consuming largely more than half of all the cotton consumed in America, indicative of an industrial development which in the coming years must make the South one of the world's greatest centers of material activity.

"No American can for one moment think of the material resources and progress of the South without rejoicing that that section is at last coming out of the long years of impoverishment and depression which it endured as a result of the Civil War.

"The North and West should be as deeply interested in the progress and prosperity of the South as are the people of the South, for the South is a part of the nation, with almost a third of the nation's area and nearly a third of the nation's population. At the same time the South must know a genuine interest in the North and West. The prosperity of one means increased prosperity for other sections. It is universally accepted that abounding prosperity in foreign nations adds to their ability to buy our products, and thus enhances America's prosperity. Business men of the North and the West in the same spirit should recognize that every advance step made by

the South, every new mine opened, every new factory built, every new water-power developed, every new acre of land put under cultivation enlarges the field for their trade with the South and increases national prosperity. Lincoln very truly said that the nation could not live 'part free and part slave.' It might with equal propriety be said that this nation cannot live, certainly in the broader sense of national life, so long as one part of the country has abounding prosperity and another part is living in poverty, as was the South for many years.

"It was not unnatural, under these conditions, that the South should have developed a solidarity of political sentiment. I am looking forward, however, to a continued broadening of the nation's life as the South increases in prosperity and comes into a full utilization of its almost boundless natural advantages and full participation in the progress of the Republic and its people.

"What has already been accomplished has amazed the world. Few people have appreciated the tremendous strain which the South carried during four years of the Civil War and the paralysis which followed. Out of that condition there could be no quick advance; indeed, a new spirit, a new concord—all had to be developed in accord with the policy of free labor.

"The New South has met these conditions. It has become one of the great producing centers of the United States, but as yet its progress has been by no means commensurate with the magnitude of its resources.

"Government reports show that the South is one of the most richly endowed sections of the world, and it seems to me that there is scarcely any limit to the possible utilization of these resources for its own benefit and for strengthening the power of this country and vastly increasing our national wealth.

"I am in hearty sympathy with the aspirations and desires of the South to bring about a full utilization of its resources.

It will be my aim to recognize the South in every righteous way and to show that in my opinion the people of all sections should forget to ask whether a man is from the South or from the North or from the West, but merely ask whether he is a real American, with a patriotism which puts America first and foremost. The patriotism of the South is beyond question. No man can ever again question the devotion of the South to the nation and to the progress of the whole country. It is my firm conviction that the policies which are favorable to the development of New England and the West are the policies which would be equally favorable to the South. Indeed, in the matter of a protective tariff, I believe the South needs protection more than other sections. It produces the things which need a fostering policy. Its sugar industry was practically destroyed by the free-trade policy of the Underwood Act; and that suggests, incidentally, the essential unity of the industrial fabric of all parts of the country. For the Underwood Act had the same depressing effect on the beet-sugar industry of the North and West as on the cane-sugar industry of the South. That measure well-nigh wrecked the entire industry, just at a time when the world was on the verge of a universal shortage of sugar. It became necessary to restore a duty on sugar; but if the blow had not been struck, if the industry had been permitted to go on with its steady and uninterrupted natural development, this country would have been able, when the world's shortage appeared, in greater part to supply its requirements independently of the rest of the world. We are paying today, in the scarcity and excessively high prices of sugar, the penalty for the mistake of applying a free-trade policy to this great staple, whereby we well-nigh destroyed the industry.

"There are other industries in the South which need protection in the same way. The peanut growers are protesting against the heavy importations of peanuts raised in the Orient by labor which is earning only a few cents a day—when paid for at all—parents and children doing most of the work, as I understand, and they are calling upon the Democratic Congressional nominees to declare themselves in favor of a tariff on peanuts, and several of them have done so, knowing that the sentiment is so strong for protection on peanuts that in some districts it is said no man could be elected who had not declared in favor of a protective tariff for this industry.

"If peanuts need protection, if sugar needs protection, other industries will also need it.

"We are facing world conditions which demand that every energy of this nation shall be concentrated upon developing at home industries which will make us independent of foreign countries. We must prosper America first.

"I am not unmindful of the likelihood of buying heavily during the next few years from Europe and from South America and from the Orient. But I insist that wherever we have resources which can be utilized for producing at home the things that are needed, there we should do so in order to safeguard our future.

"If a few years ago we had not developed the sulphur interests of Louisiana and Texas, this country would have been entirely without this very essential means of making munitions needed in the recent war, for these two States practically furnished the entire sulphur supply of the nation.

"There are many other natural resources which must be utilized to make us independent of foreign supplies under all conditions. And the South has these natural resources to such a great extent that I trust they may be so thoroughly developed that the nation as well as that section itself will secure the full benefit of the complete development of all the South's great natural advantages.

"There are problems facing the South, some of which have faced it during the past, which need great care in handling. They should be met with a sympathetic interest on the part of people of other sections, and I am sure that the South can trust the Republican party to safeguard everything which makes for its broadest development, its highest educational advancement and the fullest utilization of its vast resources.

"Hampered for many years as the South was by an economic situation which practically forced its people to abandon the old well-rounded agricultural diversity which existed prior to the Civil War, it nevertheless steadily moved forward as rapidly as possible toward diversified agriculture. For years its progress was slow, but during the last five or ten years it has made a very great advance.

"The reports which have shown its wonderful increase in food production, making a large contribution to the nation's food supply, are merely indicative of what the future may show. For years it was charged with being a worshipper at the throne of King Cotton, but this was largely due to an economic situation which really made it a slave to King Cotton, and these economic conditions were not of its own making. It is now rapidly developing a widely diversified agriculture which is giving to its farmers—the land owners as well as the tenants and farm laborers—a higher measure of prosperity than they have known since the Civil War. In this respect its agricultural prosperity is beginning to match that which has made much of the West a section of abounding wealth and of splendid educational facilities, for without the wealth with which to maintain education no section, except to a limited extent, can develop its educational life.

"Increasing prosperity of the South means better educational facilities for all of its people, better roads, a larger influx of population from the North and West as permanent residents as well as winter tourists.

"No one rejoices more than I do in the signs of progress which are in evidence everywhere throughout the South. It has been my pleasure to know many of the leaders of Southern development as well as the leaders in political affairs, and I trust that when the votes are counted in November next I may feel that I have been elected President of a united country, and I pledge to all sections that I shall know neither North nor South, East or West in any sectional point of view, and that I shall regard the advancement of every section with equal concern and rejoice that whatever inures to the progress and prosperity of the Atlantic Coast or the Pacific Coast, of the Central West or the South, will be in the interest of the entire nation and to strengthen the forces which make for safeguarding our country in this hour of world turmoil in which the forces of civilization are contending against the forces of barbarism."

Report of Federal Reserve Board Of Vital Interest to Cotton Producers and Consumers

Baltimore, Md., August 6.

Hon. W. P. G. Harding,
Governor Federal Reserve Board,
Washington, D. C.:

In the July 30 report of the Federal Reserve Board it is stated that "many New England mills reporting supplies of raw cotton sufficient to last until next year." It is to be assumed that the Federal Reserve Board would not have made such a statement as this, which is of very vital importance to the cotton trade of the world, without having a definite list of the New England mills which reported that they had sufficient supplies of raw cotton to last until next year. Will you therefore kindly wire us (collect) the names of the New England mills which have made this report, so that I may see exactly how many are thus supplied with cotton and the extent of their operations. It is a very serious statement to make, for if accepted as correct by the public it would have a marked effect upon the cotton trade of this and other countries. It is hardly conceivable that the Federal Reserve Board would issue such a statement without having a full and complete list of such mills, and I shall therefore appreciate a prompt reply from you on the subject, giving all the particulars available as to the mills and when these reports were made to the Federal Reserve Board.

RICHARD H. EDMONDS, Editor.

Baltimore, Md., August 7.

Hon. W. P. G. Harding,
Governor Federal Reserve Board,
Washington, D. C.:

Dear Sir—Acknowledging the receipt of the letter of your secretary to the effect that you were absent from Washington, but that my telegram would be referred to you when you return to your office on Monday, I have just wired your secretary as follows:

"Acknowledge receipt your wire. Can you not refer my telegram to some other member of the board who would be authorized to reply to questions asked Governor Harding."

If an official reply has not been sent me prior to the receipt of this letter, will you kindly wire me as early Monday as feasible, since our forms are made up for the press early Tuesday morning?

The statement by the Federal Reserve Board that "many New England mills reporting supplies of raw cotton sufficient to last until next year" is susceptible of many meanings. It was issued just two or three days before the closing of the cotton year, and it is impossible to decide from the way in which it was worded whether the words "next year" meant the calendar year beginning January 1, 1921, or the crop year, beginning August 1, 1921. Indeed, if it referred to the next crop year, it might by one construction have meant August 1, 1920, since it was issued two days prior to the ending of the last crop year. That, however, is entirely too narrow an interpretation to put upon such a serious statement. But I am at a loss to know whether it was intended to convey the information that many New England mills had a sufficient supply to last through into the next year meant the next calendar year or the next crop year, or the next fiscal year of the Government. Thus at the best it is a very badly worded statement, and shows a lack of care on the part of the writer of it quite out of keeping with so serious a report as that of the Federal Reserve Board when it bears so directly upon a matter of such vital importance to the welfare of a large portion of this country.

I cannot for a moment conceive that the Federal Reserve Board would have permitted such a statement to be issued without having what it regarded as absolute and unquestionable proof as to the correctness of the statement made. But the public is entitled to know the facts in regard to that proof, and to know whether the Federal Reserve Board has in its possession reports of many New England cotton mills which claim to have a sufficient supply of cotton for their needs into next year.

The public is also entitled to know what is meant by the term "next year," for the cotton trade largely speaks in terms of crop years running from August 1 to July 31, and no one can possibly know from the form of statement of the Federal Reserve Board whether the crop year or the calendar year was meant.

The matter is of such vital importance to the cotton producers

of the entire South, as well as the cotton trade of the whole world, that I beg you will wire me fully as early Monday as possible.

Very truly yours,

RICHARD H. EDMONDS, Editor.

Reply of Governor Harding of Federal Reserve Board.

Washington, D. C., August 9.

Richard H. Edmonds, Editor,
Manufacturers Record,
Baltimore, Md.:

Returned from Atlanta noon today, and have just finished reading your telegrams of Friday and letter of Saturday. Board's monthly review of general business and financial conditions is a compilation by its statistical and research divisions from reports furnished by the Federal Reserve agent in each district as of the fifteenth of each month. Answering your inquiry as to the meaning of the word year, would say that it always, unless otherwise specified, means in these reports the calendar year, as distinguished from the Government fiscal year or the cotton year. The board does not feel authorized to make public the details you ask for. It has no authority to demand information which is furnished it as a voluntary courtesy by private individuals, firms and corporations, and cannot therefore publish in detail important statistics relating to their private business.

HARDING, Governor.

The foregoing reply is wholly unsatisfactory, and will be unsatisfactory to the cotton-producing interests of the country. The Federal Reserve Board made a distinct statement to the effect that "many New England mills have a sufficient supply of cotton to last them until next year." Governor Harding, however, declined to give any information as to how "many" mills are meant by the word "many," and, therefore, the country is wholly in the dark as to the meaning of a term which can be made disastrous in its effect to the producers of the South.

If this information has been furnished as a voluntary courtesy to the Federal Reserve Board by private individuals, firms and corporations, as stated by Governor Harding, it is entirely feasible for information of this character to be furnished to the Board for the express purpose of breaking down the market, and we are amazed that the Federal Reserve Board should accept such statements from interested parties bearing on any phase of industry or finance without giving the facts to the public in order to let the public judge as to their real value.

The public has a right to demand from the Federal Reserve Board that it shall either give the facts on which these reports are based, or else that it shall not volunteer statements based on information which may have been furnished for the express purpose of creating an erroneous impression as to the amount of cotton held by mills.

Statistics are dangerous things to play with, and statements based on statistics without furnishing the public the opportunity of analyzing these statements may be deadly dangerous to public welfare.

If the information was furnished by the Federal Reserve Board agents in New England, it is entirely conceivable that these agents, influenced by the constant efforts of many New England mills to break down the price of cotton, might have been biased by that feeling and without adequate investigation as to how "many" mills were supplied with cotton.

If this information was furnished by the mills direct, we insist that the Federal Reserve Board had no right to publish such a statement without specifically announcing that the statements were based on information furnished by New England corporations and the number definitely specified which claimed to have an ample supply of cotton for the balance of the year.

Mr. Harding's telegram has not thrown any light whatever

upon the situation. It only serves the more strongly to emphasize the seriousness of the blunder which was made by the Federal Reserve Board when it put forth the statement of "many New England mills reporting supplies of raw cotton sufficient to last until next year" without any facts on which the public could judge as to the correctness of these reports. If this is a fair sample of the value of the reports issued by the Federal Reserve Board, then the sooner its reports are discontinued or put on a sounder basis the better for the country.

"INCREASED PRODUCTION" OF FAILURES.

R. G. DUN & CO., New York, report that last month's insolvency statistics disclose the largest number of commercial failures of any month since December, 1918, and the heaviest indebtedness, excepting that of June, 1920, of all months back to January, 1916. Numbering 681 and supplying \$21,906,412 of liabilities, the July defaults, as reported to R. G. Dun & Co., compare with 674 reverses for \$32,990,965 in June, 1920.

How could it have been expected that there would not be an increasing production of failures by reason of the work of the Federal Reserve Board in decreasing credits? The Board has been boasting about its policy having brought about increased production, but the only possible increased production we have been able to find as a result of its work is increased production of failures and sorrows throughout the country due to failures.

A MONSTROUS WRONG.

"In the meantime, the Federal Reserve Board of New York is earning at the rate of over 200 per cent a year on its capital! Do Federal Reserve banks ever profiteer? The Government denounces profiteers and calmly goes on permitting its Federal Reserve Board to reap such exorbitant profits, and yet sees not whether such a course will inevitably lead, but others do see."—MANUFACTURERS RECORD.

Who pays? "Jones, he pays the freight." Currency should be furnished your local bank at the cost of printing only. Instead, your local bank is paying an enormous rate of interest to the Federal Reserve Bank for the currency it requires. The Federal Reserve Bank is prospering at your expense. It is a monstrous wrong.

Ask yourself the question, "Why should my local bank be compelled to pay another bank a heavy rate of interest for currency that it should be privileged to issue on its own account?" The First National Bank of Waco has a capital stock of \$600,000; a proper system would permit that bank to issue its notes—currency—equal to the amount of its capital stock; that is to say, \$600,000, with no other expense than the cost of printing. That would enable the First National Bank of Waco to very considerably reduce the interest rate to you, the borrower, and at the same time enable it to earn as much, perhaps more, as it now earns.

And this isn't conjecture. France and Scotland and Canada have this system. We got our plan from Germany, and the German system was approaching a crisis when the World War came on—possibly contributed very considerably to the decision for war. If we do not face this question, fellow-citizens, it will compel out attention further down the line, when possibly we will be less prepared than now to apply the remedy.—Waco (Texas) Times-Herald.

LABOR INCONSISTENCY.

A CORRESPONDENT of the MANUFACTURERS RECORD calls attention to a dispatch from Cleveland to the effect that the Brotherhood of Locomotive Engineers proposes to delay the construction of its proposed 20-story building in Cleveland "because of the present high cost of building materials, tightness of credit and high wages." Commenting on this, our correspondent says:

"This will interest you on account of the inconsistency of the Brotherhood and Mr. Gompers, who, while constantly demanding higher wages when someone else has to pay them, prove four-flushers when they have to pay high prices caused by high wages for things they wish to buy."

Our correspondent is quite correct in this suggestion. The very men who are constantly demanding ever-increasing wages are at the same time encouraging inefficiency and lessened production, and are fighting high prices for which they are very largely responsible. But what else could be expected from the work of Gompers and his crowd?

DOES THE RIGHT HAND OF THE COAL INDUSTRY KNOW WHAT THE LEFT HAND IS DOING?

THE National Coal Association's stand in upholding the rights of the coal producers to export their product with the same freedom that other industries enjoy was endorsed unanimously by the Winding Gulf Operators' Association of West Virginia.—Coal Review.

We quite agree that the export of coal should be unimpeded, but it is a very remarkable thing that the National Coal Association while so insistent on its own right to have the same export privileges as other industries should have massed its entire influence in favor of depriving other industries in America of the right of transportation at home. No industry can consistently ask for special privileges at home and at the same time protest against special privileges at the ports.

The coal industry ought to have had enough experience with Government control to keep away from it now. We greatly fear that never again will the industry be able to free itself from the interference of Washington. It shoved its head into the halter easily enough, but how about getting it out?

CHARITY-SEEKERS FROM NEWSPAPERS.

N. W. HAYNES, publisher of Drug and Chemical Markets, in a letter to the MANUFACTURERS RECORD, gives a very hearty endorsement to the position of this paper in regard to free copies to commercial organizations, and on that point writes:

"Your very efficient scoring of the New York Chamber of Commerce on their free-copy scheme appeals so particularly to me that I cannot refrain from writing to congratulate you.

"We have had similar requests from the same organization and, of late, several others from commercial associations, to all of whom we have replied that we have absolutely no free lists and that we do not even exchange with American publications.

"I suppose that industrial and trade paper publishers are themselves to blame for the notion which so many people have that a complimentary copy costs nothing and that they really are conferring the compliment by asking to be put on the list, and I am mighty glad that there are some of us who are beginning to appreciate that our papers are worth their subscription prices."

HELPFUL TO MINISTERS.

Noxubee Lumber Co.
Brooksville, Miss., July 30.

Manufacturers Record,
Baltimore, Md.

Gentlemen—We believe the ministers of the country should read the MANUFACTURERS RECORD, and we take the liberty of enclosing herewith our check for \$13 as payment of annual subscription for two ministers, and will ask that you send the MANUFACTURERS RECORD regularly to the following: Rev. W. W. Harsfield, Brooksville, Miss.; Rev. Benjamin Gwinn, Brooksville, Miss.

Kindly forward each of them our complimentary card, and oblige,
Yours very truly,

NOXUBEE LUMBER CO., INC.

The MANUFACTURERS RECORD appreciates the suggestion of the Noxubee Lumber Co. to the effect that this paper would be of interest to ministers. We already have a fair list of ministers on our subscription list, some on their own account and some whose subscriptions are paid for by friends who believe that the ministers of the Gospel should have the opportunity of reading business publications which are discussing the great issues of the hour.

We have never yet found among the ministers who read the MANUFACTURERS RECORD anything but the highest appreciation of its work.

How to Increase Railroad Efficiency to the Good of All Interests

HOWARD ELLIOTT, chairman of the Northern Pacific Railway Co., in a letter to the MANUFACTURERS RECORD commending some recent editorials in it on the railroad situation, writes:

"We are all right in this country if all hands would only settle down and work. There are boundless opportunities for all."

Mr. Elliott follows up this interesting statement, which is an absolutely correct one, as to the limitless opportunities in America, with an elaboration of that point and a general discussion of the railroad situation since the action of the Interstate Commerce Commission in advancing rates. In this statement Mr. Elliott said:

"The decisions of the Labor Board about wages, and of the Commerce Commission increasing rates to meet those wages and to establish the earning power of the roads on the basis of present costs, make a new platform for the transportation system of the United States, which will have far-reaching effects on the economic development and history of the country.

"Ever since the Cummins-Esch bill became law I have had an abiding faith that the Commerce Commission would so interpret it that its fundamental principles would be established. The Commission has now done this with commendable promptness, considering the complicated situation with which it had to deal. Arguments may be made for and against some of the figures and percentages named in the decision, but the principle is now plainly declared that the unrivaled railroad system of this country shall not only be regulated in the interest of the public, but also shall be protected, encouraged and developed in the interest of that same public.

"The will of the people as declared by Congress is now made effective, namely, that their railroads shall be owned and managed by individuals, and that owners are as much entitled to a return on railroad property as are owners of any other kind of property that is necessary to the public welfare, and is honestly and efficiently administered.

"Everyone interested, however, should bear in mind the fact that this decision is not a rubbing of an Aladdin's lamp so that communities, shippers, travelers, employees and owners will at once obtain their every wish. Improved service and enlarged facilities, rehabilitation of road and equipment cannot be obtained in a few days. Much hard work remains to be done, a great deal of courage must be displayed, and much self-denial and patience exercised.

"The transportation machine has been undernourished for many years, and particularly so for the last ten. In addition, the complications and dislocations in methods of maintenance and operation that developed during the war and governmental control are serious and can only be adjusted slowly. The return of freight cars to the owning roads and restoring them to pre-war condition is one very large task that is vital to shippers and railroads alike.

"The great essentials of the transportation machine should be put in complete repair and increased in capacity and number before money, men and material are used for non-essentials that are desirable but can wait. Trackage, terminals, motive power, cars (both freight and passenger), facilities for caring for equipment and suitable working conditions for employees are behind the necessities of the country today, and we must prepare now for the next uplift in business.

"It is to be hoped, therefore, that prosperous, progressive

and ambitious communities will not assume that this decision of the Commission furnishes unlimited money for things like elaborate passenger stations, grade separations and other non-essentials, and that they will not make insistent demands that such projects be undertaken at once. Every dollar that the railroads can save under the new rates and under the new wages will be needed to make payments for interest, taxes and reasonable dividends so as to sustain their credit and to do the essential work above outlined, so that the commerce of the country can be moved satisfactorily. Desirable but non-essential work should, in the interest of the country as a whole, be postponed until we know more about the results to be obtained under the new conditions.

"The law and the Commission both say that operation must be honest, efficient and economical. This, however, can only be accomplished by having individual consumers and producers of transportation honest, efficient and economical. As citizens, it is to be hoped that all railroad users and workers will carry out the spirit and the letter of the law, and will help the country by working hard and faithfully, by conserving transportation, by eliminating waste and by co-operation to make the railroad system adequate under the new law and the new conditions.

"Suppose that the 2,000,000 men in the railroad service, from the water boy on the extra gang to the highest executive, could save five cents a day by greater and more intelligent effort, by greater care of plant, materials and fuel, by the elimination of waste and the adoption of improved methods; the total saving would be \$30,000,000 for a 300-work-day year. This is enough to buy 400 heavy locomotives or 10,000 freight cars. Suppose only an average of one hour a day could be saved by shippers in loading and unloading the 2,400,000 freight cars; this time for a 300-work-day year would be 720,000,000 car-hours, or 30,000,000 car-days, or 100,000 cars per year added to the available supply of the country without the investment of new capital.

"Now, it is necessary for all good citizens, whether in or out of railroad service, to obey the new transportation law in spirit and letter, and to work and save day in and day out until the wastage of the war is made good and the transportation system brought back more nearly in keeping with the needs of the country.

"I have just returned from an 8000-mile trip to the North Pacific Coast and back, and never was I more impressed with the possibilities of growth and development in the United States than I was on this trip. Nature has been very good to this country in nearly every way, and if man will only do his part—work, save and not expect perfection in every walk of life—our progress in the next 30 years will be more wonderful than in the last 30. An effective and adequate transportation machine is necessary for that progress, and it can only be obtained by the hardest kind of work and economy."

The points made by Mr. Elliott are worthy of very thoughtful consideration. We need once more in America to preach the doctrine of boundless opportunity. We need to change the pessimism of the wail of the socialistic agitator, whether it comes from the false economic teacher in our colleges, the fraudulent worker for the devil, disguised in the livery of Heaven, preaching socialistic propaganda from the pulpit, or whether it comes from the mouth of such men as Trotsky and Debs and Foster and all the gang of workers spewed from the bottomless depth of the netherworld upon this earth to carry on the devil's campaign.

America, as Mr. Elliott says, has indeed been marvelously blessed. Its resources are beyond our comprehension. Nature has been lavish to the extreme. There are opportunities without limit for profitable employment, but there is no opportu-

nity for the idle and the thriftless, the brainless and the spineless, who believes that the world owes him a living, but is too lazy to go out and collect it.

Mr. Elliott points out the fact that if the 2,000,000 railroad men in the country could, by more effective work or increased effort to save expenses to the road by which they are employed, save an average of five cents a day each—and surely there is scarcely an employe on any railroad in America who could not do more than that, the aggregate saving thus effected, which would add to the prosperity of the roads and the betterment of the employes, would be not less than \$30,000,000 for a 300-work-day year, and if one hour a day could be saved by shippers in the handling of freight, loading and unloading cars, the aggregate saving would be equal to adding 100,000 cars per year to the available supply of the country without the investment of new capital. The capital thus saved would be available for other things to the benefit of all.

Here is an opportunity for the railroad customer and the railroad employe to unite in doing the work which will benefit every man and woman in this country. More efficiency in work, the saving in the little things which seem very small at the time, but which in the aggregate add enormously to the expense; the saving of a few minutes or an hour in the loading or the unloading of cars will be of untold value in helping to solve the transportation situation.

An interesting letter bearing on the railroad rates as viewed from the standpoint of a shipper is from Mr. A. G. Bailey, president of the Bailey Cooperage Co., Washington, D. C., a concern which has mills in Virginia and North Carolina. In writing to this paper in regard to an editorial commending the action of the Interstate Commerce Commission, Mr. Bailey says:

"As a long subscriber and close reader of the MANUFACTURERS RECORD, I have read with much interest your article relative to the rate raise to the railroads of the United States.

"This article is pure and simple and full of good broad views and hard common sense.

"Our concern are large shippers over the transportation lines; our hauls being long ones which reach the entire length and breadth of the States.

"To begin with, I want to say I do not own one dollar of stock in any railroad in the land, but at the same time this rate increase meets with my approval, notwithstanding the fact it will put upon us a larger burden in the way of freight charges, but I have long ago seen that unless the railroads could get sufficient money with which to purchase rolling stock and keep up their lines that the public would be the sufferers, and how anyone could see differently it is a puzzle to me. The railroads are the main arteries of the United States, and when you hampered these and tried to keep them down in any way they not only suffered, but all industries and every individual of the land suffered. This is plain and has been plain to me for several years.

"I do not forget the fact that employes of these gigantic corporations should be paid a fair and living wage, and now that they have gotten their increase in wages along with the increase of the rates to the railroads, it is plain to see that we are in for prosperous times ahead for several years to come.

"It is an unquestionable fact that the railroads are owned and managed by the strongest and most able men of the country, and I believe they are such men as want to not only work to their own interest, but to the interest of the public at large, and I believe that the result of this increase in rates, the railroads will demonstrate to the public that they have the interest of the public at heart as well as their own.

"In a short time the result will show for itself and all of us will see that what the Interstate Commerce Commission has done will prove profitable to all."

The president of the Southern Railway Co. has referred to the advance in railroad rates as "terrific," and he believes that it will be necessary for railroad managers to use their utmost to bring about an ultimate reduction of rates. In a way this may be true. The increase in rates is not, however, as great as is the depreciation of the dollar, and thus the enhanced cost of doing things.

Upon railroad managers there rests a tremendous responsibility, not only to increase to the utmost the efficiency of transportation and to utilize the enlarged income so as to give to the public the facilities which it has a right to expect of passenger and freight business. The public has had no right to look for anything better than it now has, because the public was responsible for upholding the former antagonism to railroads by the Interstate Commerce Commission and State commissions. We are all holding the penalty of the viciously advised and uneconomic campaign. Now, however, it behooves the railway managers, while stimulating their men to the increased efficiency which President Elliott so strongly emphasizes, to do their utmost to give the enlarged facilities which the public so sadly needs and thus once more to win back the public favor lost a quarter of a century ago and to strengthen the ties of friendly relations between the public and the great transportation systems upon which the welfare of the country depends.

IS RAILROAD MANAGEMENT SUSCEPTIBLE OF IMPROVEMENT?

THE president of a Class 1 railroad, referring to our suggestion that a committee of the country's ablest business men be appointed to consider the whole railroad question, writes to say that he believes such a proceeding would be of great benefit to shippers and railroads alike if Mr. Schwab would consent to head the committee. "The invitation will hardly come from railroad managers; the initiative must come from the shippers, who, I believe, have a right to such an investigation on the theory that the additional rate increases are primarily the concern of the shippers. Many railroads are ably managed, but some are unfortunately very badly managed. There still remain some examples of the 'public-b damned' school. The only possibility of disclosing the facts as to management is through a committee of the ablest men procurable, whose conclusions must command the respect of railroads, shippers and the general public alike. If a general conference of the great manufacturing associations could be secured, such a committee could be arranged for."

What management is bad and what is good a study of particular railroads would reveal. It is important to note, for instance, that not all railroad managers agreed that there was any necessity for the resort to emergency measures by the Interstate Commerce Commission. Some took the view that priorities instead of helping the situation would make it worse. On July 9 Mr. W. H. Williams, vice-president of the Delaware & Hudson Railroad, wrote to Chairman Clark, summarizing the New England coal situation. Referring to the amount of coal in storage in New England, he said: "The amount would seem to be sufficient to reasonably protect the New England territory, and does not warrant the action of the Governors of the New England States in demanding priority orders on coal shipments to New England at a time when the public has become unduly excited and when the issuance of such orders only causes further embarrassment instead of bringing relief. Furthermore, priority orders of this kind only add to the transportation difficulties when, as at present, the New England lines already have all the traffic, or more, that can be promptly moved."

As many industries were virtually put out of business by the open-top car orders and others penalized severely, it is perfectly clear that before resorting to extreme measures the Interstate Commerce Commission and the railroad managers should have been sure of their ground. A committee of representative business men, we are confident, could find some means of solving the transportation tangle other than the restriction of the nation's business to the capacity of the carriers.

How the World Missed a Real Peace

AS compared with those whose untrained mental idiosyncrasies were the direct cause of the proposals from Germany for an armistice, whereby the world has been plunged into unspeakable peril from Bolshevism and a persistently treacherous Germany, the plain speaking and the clear understanding of King Alfonso are both refreshing and encouraging. No document has come to light in the past three years that equals in interest the interview between the King of Spain and Colonel Devigne in 1917, which has just been published in the Paris *Matin* and reprinted in this country by the New York Times.

King Alfonso had summoned Colonel Devigne, Military Attache at Madrid, to an interview, in which the King analyzed the military and political relations of the powers with rare acumen, revealing information of exceptional accuracy and the ability to reason upon the facts with the mind of an expert. His exposition of the situation makes the utterances of our politicians, in Congress and out, seem like the blundering bluster of tyros. This is what it means to specialize, to be educated for a profession.

King Alfonso desired to terminate the war. He foretold the course of events with singular penetration, although it must be admitted that he did not foresee that, through American pour parlers with Germany, this monster of the North would be saved from suffering the crushing defeat that it deserved. It turns out that the King of Spain knew the political mind of Austria as did few other men in the world, and what he says goes far toward explaining the mysterious role of a Melchizedek that was played by Count Czernin at about the same moment as this interview, which occurred in the spring of 1917, just when our preparations to enter the war made the defeat of the Central Empires certain and the annihilation of Germany possible.

The plan proposed for an immediate peace was to detach Austria from her dominating ally, imposing penalties that would be a full and complete admission of Austria's defeat, and that in part would rectify the wrongs committed in her past wars of conquest and in the attempt which she had made, as Germany's partner, to despoil Europe. The results would have been twofold. The Austrian throne would have been preserved, which Alfonso desired, and along with it the theoretical question of self-determination would have been set aside in favor of the more practical and helpful one of economic solidarity through the survival of the consolidated kingdoms. The severe economic difficulties that have arisen which make the dismembered Austrian Empire the economic sore-spot of Europe reflects sadly upon the counsels of some American politicians who forced unnatural conditions upon that part of the world in whose politics the American people have only the most elementary knowledge at best, and not the remotest practical or sentimental interest.

King Alfonso believed—and when he said that we may safely conjecture that he knew—that he could thus bring Austria to accept a separate peace. That would instantly have isolated Germany from Bulgaria and Turkey, involving speedy collapse of the Eastern offensive, leaving Germany to her fate. At that moment, before the United States was in a position to inject the pacifist doctrines of some of its leaders into the European situation, it will be comprehended that France would have allowed no dictation to despoil her of the proper fruits of victory, but that she would have made the world safe for republican France for all time.

The King said, speaking of alternative courses: "If, on

the other hand, you wish to crush Germany for your (France's) own benefit and the benefit of civilization, be satisfied with the dislocation of the hostile coalition. Make peace, a victorious peace, a peace glorious for all the Allies and as well infinitely advantageous to France, England, Belgium and Italy—a peace more than honorable to Russia. After your triumph—toward autumn—offer to the Central Powers a terrible peace, YOUR peace, as I said in my last talk with you. Germany will refuse; Austria will accept if you are willing to offer her, indirectly, terms that will permit her to exist."

It is interesting to see how clearly he distinguishes between "traitorous Russia" and the personal loyalty of the Czar. Realizing, as the world now does, how utterly misguided were the friends of democracy in welcoming the absurd attempt to introduce so-called democratic institutions into a country as unprepared for them as was Russia, it seems a pity that the powers that could at first hold up the hands of Milukov and his co-conspirators did not instead impose a loyal ministry upon the Czar, which he himself would have welcomed, and which would have ensured the administration of that powerful country in the interests of justice and civilization. It is too late now; but we cannot overlook the fact that King Alfonso had seen deeply and clearly into the heart of this matter, and that he, with such men as the Count of Romanones and Dato, who frequently alternate in power as premiers of Spain, were staunchly pro-Ally, pro-French and anti-German. There has been much ignorant criticism of Spain and her King as having been pro-German during the war. This interview, a document that everybody will read, or try to read, answers that accusation. It reveals Alfonso as cherishing a particularly active hostility toward the German Emperor, and it also discloses what so many of our own people missed—that the difficulty with Germany is an ineradicable ethical defect in the German people themselves. He points out the shifty policy that might be expected from them when, if it should seem to suit their purposes better, the ruler who would present himself to negotiate peace might be not William of Hohenzollern, but Wittelsbach of Bavaria, a Nassau of Wurttemberg or an Elector of Saxony.

This remarkable document, which has startled the world by its frank, illuminating statements, was being conveyed to the French ministry as a presumptive basis for a definitive move for peace when it was mysteriously abstracted from a taxicab in Paris. It was recovered afterward by the French secret service, but the moment and perhaps also the opportunity for action had then passed. Proposals of such serious import once revealed may become impossible to carry out.

It does, however, serve to indicate that Spain is a country to be reckoned with in a great Mediterranean alliance that may become necessary to withstand the Germans and Russians, and that the King is capable of giving counsels from a sound and instructed mind.

POPULATION MOVEMENT SOUTHWARD.

D. R. H. E. HORTON, agricultural commissioner of the American Steel & Wire Co. of Chicago, whose article about the South appeared in a recent issue of the MANUFACTURERS RECORD, writes:

"If the true story of the South is told and reaches the hands of the people of the North, we shall see another trek of people from the North into the South such as was witnessed after the Civil War, when the people of the East trekked into the West.

"I am very much concerned at the present time with the lopping off of appropriation for carrying on tick eradication and economic surveys in the South. What can Southern Representatives be thinking to permit this?"

BURNING THE BARN IN ORDER TO KILL A FEW RATS.

THE president of a large manufacturing industry in the South, who feels that it cannot afford to permit its name to be published for fear of the effect on its banking connections, writes in regard to the work of the Federal Reserve Board as follows:

"It is a pity that the Government, through the Federal Reserve Bank, should use its powers to depress business, as those of us who only ask for legitimate profits almost face bankruptcy, although thoroughly solvent. While this campaign was directed primarily as they say against profiteers, it seems at the present time to have affected practically every one, not only the merchant and the manufacturer, but the farmer as well.

"I fail to see how reserves are going to be increased and our capital increased without increasing farm and factory products, but with the banks all scared and business paralyzed and the wheels of commerce locked, production is being decreased instead of increased. I wish I knew what might be done to help the situation—possibly you can do something."

This is only one illustration of the culmination of the work which the Reserve Board undertook early last winter, and which the MANUFACTURERS RECORD vigorously attacked at that time and which we have been fighting ever since. In breaking down business in order to deflate wages and commodity prices the Board has carried on a policy as wise as that of a man who would set fire to his barn, with all of his livestock and crops in it, merely for the purpose of getting rid of a few undesirable rats. The Board has started a conflagration which has already cost this country some billions of dollars and will cost it many more billions unless the conflagration can be stopped. It is time for every intelligent man in the country who recognizes the danger of the present situation to enter his protest and to keep protesting against a work which has frightened all the bankers in the country and caused a halt in all business operations.

BUSINESS CONDITIONS AND THE BUILDING SITUATION.

HEsitATION in business is general. People are on the fence, undecided whether to go forward or not. Forward motion is progress, backward motion is death. On the one hand we have those who are trying to beat down prices, and on the other those who are trying to secure increased production, from housebuilding to transportation. They are pulling against each other, though both are striving to reduce the cost of living. The law of supply and demand is working today as of always, and until supply is greater than demand we will have people bidding against each other, with the inevitable result of raising the price level.

Greater energy and more work are the only things that will increase supply, but to accomplish this there must be an incentive which will create the desire to work harder. If a man who wants to increase production sees that there is only a bare chance to make a little profit on his work, with the likelihood of losing on the job, he is very apt to seek other fields offering better prospects for his investment.

Take the building industry. The urgency of the need for new building throughout the country is unmistakable. Competent authorities have estimated that the country is behind in its building program from eighteen months to two years, which means, it is said, a shortage of anywhere from \$3,500,000,000 to \$7,000,000,000 worth of construction.

Slackness in building is attributed in large part to hesitation to undertake new building at prevailing costs and to the difficulties of financing, trouble in securing materials and labor,

and in the case of dwelling operations, to the uncertainty of being able to dispose of the houses in a reasonable time at the high prices that builders are forced to ask because of the present cost of construction.

The Guaranty Trust Co. of New York states there is no general expectation that by postponing new building for a few months marked savings may be realized through future declines in prices. Even should the long-desired recession in prices develop, there is said to be much ground for the belief that for some time yet building costs will show at best but slight decline apart from temporary fluctuations. It is further believed by many that there will be advances in building costs generally.

Writing on the present situation in the building industry, H. H. Fox, vice-president of the Turner Construction Co. of New York, states:

"There is no doubt whatever that the estimated costs of buildings today are higher than they have ever been. It is a fact, however, that building costs have not risen as much in the last five years as commodity prices."

In consideration of the question of the possibility of building in a year or two at materially less than could be done under prevailing prices, Mr. Fox points out that this involves two principal factors—the general price level and the demand for building construction. In view of the enormous increase in money in circulation, increased credit, etc., it seems unreasonable, he believes, to look for a rapid drop in the general price level. Regarding the demand for buildings, he states:

"From the value of building permits issued in the principal cities we find that the building work done between 1912 and 1919 was short of normal requirements by the following amounts:

| | |
|------------|-----------------|
| 1913..... | \$50,000,000 |
| 1914..... | 160,000,000 |
| 1915..... | 150,000,000 |
| 1916..... | 160,000,000 |
| 1917..... | 730,000,000 |
| 1918..... | 1,050,000,000 |
| 1919..... | 600,000,000 |
| Total..... | \$2,900,000,000 |

"This figure is still based on the 1912 cost standard. Based on present-day cost, it would be over \$7,000,000,000, representing more than two years' normal building construction.

"A further factor tending to increase the demand for buildings at the present time is the reduction in working hours which has taken place in many industries, necessitating a corresponding increase in working space if goods are to be produced in the same quantity.

"In the face of this condition it is hard to see how there can be any material decrease in the cost of buildings for many years, excepting as these costs may be reduced by a drop in the general price level.

"The Irving National Bank published a booklet in May, 1920, entitled 'Problem of Prices,' in which was shown the 'Federal Reserve Bank curve of production in the United States of 10 basic products.' With production in the year 1900 taken as 100 per cent, production in 1912 is shown as 160 per cent, and production in 1918 as 195 per cent. This indicates that in the years 1912 to 1918 approximately the same rate of increase was maintained as in the years 1900 to 1912. In 1919, however, the production decreased to 182 per cent. The production in 1919 was therefore below normal requirements, and if we take into account the fact that during the war years a large part of the basic commodities produced were used up in the war, there is undoubtedly at the present day a considerable shortage to be made up.

"Contrast this condition to the one which prevailed just previous to the 1907 panic. In 1906 the production of wheat was larger than in any previous year, with the exception of 1901. In 1906 the production of corn was greater than in any previous year. In 1906 the production of cotton was greater than in any previous year, with the exception of 1904. In both 1906 and 1907 the production of pig-iron was greater than in any previous year. In 1906 the production of copper was greater than in any previous year.

"Therefore, the condition as to production of commodities today is so radically different from conditions which have preceded periods of depression in the past that it is difficult to believe that any falling off in demand for goods of all kinds can continue for more than a short period."

Governor Cox Favors the League, But Wants It Sugar-Coated

Governor COX devotes almost a third of his speech of acceptance to a discussion of the League of Nations. He sweeps the ground from under those Democrats who had expected from him some less obstinate view than that which has characterized President Wilson. He is for the League, and for it as it is. His coat of sugar would not change it essentially. To him all other issues are subordinate. He thus stakes his claim for preferment on international policy, although, of course, his own activities in that line of public life have not been at all pronounced.

"He kept us out of war" elected Mr. Wilson. "He'll put us in the League" is expected to elect Mr. Cox.

Governor Cox proposes, as a substitute for other reservations, two of his own. The more important of them reads:

"It will, of course, be understood that in carrying out the purpose of the League the Government of the United States must at all times act in strict harmony with the terms and intent of the United States Constitution, which cannot in any way be altered by the treaty-making power."

Article 10 of the League Covenant reads as follows:

"The members of the League undertake to respect and preserve as against external aggression the territorial integrity and existing independence of all members of the League. In case of any such aggression or in case of any threat or danger of such aggression, the Council shall advise upon the means by which this obligation shall be fulfilled."

There is in our Government the machinery of dedication and the machinery making such dedication operative. The machinery of dedication, by a mere executive fiat, established a century ago the policy which we know as the Monroe Doctrine. That Doctrine does not contravene the Constitution by abruptly taking the war-making power out of the hands of Congress, but for 10 decades it has been well understood that in case of an attempt by any European nation to violate that fiat, immediate war by the United States would follow. When the nation has solemnly pledged itself to pursue a definite course of action, in the event of named contingencies, the mere technical method of making the pledge good is of minor importance.

When a man engages to pay a sum of money on a specified date, it is assumed that he will not steal wherewith to pay. The honorable method of securing the essential funds is assumed. When a nation undertakes to perform certain specified things, its means for so doing are assumed. The assumption in this case is that the solemnity of the pledge would compel the legislative machinery to follow constitutional lines in taking the promised action.

Either, as the President has said, our obligation is a moral one only and therefore stronger than any legal commitment, or it is a legal obligation, in which case, as Governor Cox says, it is unconstitutional. From the horrors of that dilemma there is no escape.

The Lodge reservation undertakes to free the nation from that moral obligation by declaring that, if called on to wage war under Article 10 by the League, the Congress shall not feel itself bound aforesaid to do so, but shall in full freedom exercise its judgment. It seeks to avoid a commitment under which Congress might physically vote according to constitutional power, but with the verdict foreordained by contract.

The Cox reservation would tighten, not loosen, the moral obligation. No honorable Representative, when the test came under such circumstances, could fail to vote for war. The "heart of the Covenant" must pump blood or it is no more the heart. It is not right to attempt to make the American people believe that they are not undertaking to do something which they are undertaking to do.

Moreover, if there is so grave doubt about the constitu-

tionality of the Covenant, what objection can there be to bringing it now within the limits of the Constitution? Certainly we who know our own Constitution should be anxious to interpret the Covenant in its relation thereto, for if we cannot, who can?

If this Cox reservation is for the purpose of providing a means later for repudiation of a solemn contract, it is an expedient too tricky for commendation. If it is not for that purpose, it is worthless.

The other reservation proposed by Governor Cox is as follows:

"In giving its assent to this treaty, the Senate has in mind the fact that the League of Nations which it embodies was devised for the sole purpose of maintaining peace and comity among the nations of the earth and preventing the recurrence of such destructive conflicts as that through which the world has just passed. The co-operation of the United States with the League and its continuance as a member thereof will naturally depend upon the adherence of the League to that fundamental purpose."

Apparently the Governor is not aware of the fact that the period of membership in the League does not depend on the wishes of the member nation. Article I specifically limits the right of withdrawal. Two years' notice must be given. A member may then terminate the connection "provided that all its international obligations and all its obligations under this Covenant shall have been fulfilled at the time of its withdrawal."

One of the Lodge reservations, which the Governor so bitterly denounces, is for the purpose of making clear the right of the nation to withdraw at its discretion, it itself being the judge of whether or not its obligations had been fulfilled. The Cox proposed reservation would merely limit the reasons for withdrawal without securing the absolute right of withdrawal.

The South particularly has had some experience in reference to technical rights of withdrawal from a union. It learned that no matter how specific the statement of such a right, future circumstances could annul it. It is a point which this nation has learned should not be encompassed with ambiguity.

It was inevitable that the Democratic candidate should have Mr. Harding on the hip when the latter so foolishly undertook to bring about an immediate peace by statute in the event of his election. No substantial body of public opinion would endorse such a dreary exit from a war so vast in its proportions, its sacrifices and its purposes. That would be peace-making of a sort to make angels weep. It is the weakest proposal the Republican candidate has made, and we do not believe that he would be able to carry it to consummation. It is true that such a resolution was passed by Congress before adjournment, but that was a political gesture merely and did not represent, we believe, the deliberate judgment of a great political party.

The thing for Mr. Harding to do, if elected, would be to approach the other nations hopefully for a quick Americanization of the treaty. That, we feel confident, is the course that is going to be pursued. When Mr. Wilson let it be known that he was going to tie the League and the treaty together inextricably he could have imagined no clearer playing into his hands than an acceptance by the country of that attempt as an accomplished fact. The truth is that it is still possible, in conjunction with the Allies, to have peace along accepted lines. To make peace any other way would be deplorable and disheartening.

It cannot be admitted that the alternative to war is acceptance of the Covenant as it is. Europe has let it be known that the contrary is the case, through the Grey letter and otherwise.

There is no enthusiasm in the Governor's pro-leagueism.

He speaks as a man caught in a trap and trying to talk his way out. There is lacking that inspiring zeal which actuates the President's utterances on the same subject. There is the difference between the man who believes with all his soul that a thing is good and the man who accepts a thing on tolerance because circumstances point him to it.

It is greatly to be regretted, of course, that the Covenant should be made a party issue. It means complete victory for those opposed to the pact, and we rejoice in that, but it almost compels many citizens to subordinate their views on domestic administration to international exigencies.

A practical barrier to the Cox program also is the impossibility of it. Were he to fill with his followers every Senate seat now being contested, he could not obtain ratification of the Covenant with his reservations only. The armistice of the situation is against him.

On the excess profits tax the candidate takes a wise and strong stand. As the Republicans are against that form of taxation also, elimination of the chief cause of profiteering is assured. The country can be grateful for that.

The candidate commends the institution of the Federal Reserve System, but fears that hostile Republicans, if put in power, "by changes in a few obscure phrases could translate it into a greater power for evil than it ever has been for good." Can it be that the Governor is not aware of the tremendous power for evil the Federal Reserve Board already is under the present policy of administration? It is truly remarkable that with the whole country talking panic and distress and every market daily recording the fact that it is Federal Reserve policy that is responsible for most of the trouble, neither candidate can find words to question the program. Mr. Harding is in favor of orderly deflation. Thousands of men whose credit has been taken from them want to know if Governor Cox favors the present policies of the Reserve Board. He does not say. His silence gives consent.

References to transportation, the budget, etc., are routine. They offer nothing new.

We agree with Governor Cox that a "first essential" in these trying days is "confidence in Government." That is going to determine the votes of thousands of men this fall. But confidence in Government is not to be got unless it is deserved. There have been periods in history when namby-pambyism passed for confidence in the Government and criticism was conspicuous by its absence. But how can we have confidence when one great department of the Government declines to recognize the concurrent power and authority of another, or when the instruments of Government are employed to favor one class or industry over another? There is never going to be much confidence in Government so long as, for instance, the Federal Reserve Board undertakes to tilt the scales of prosperity, or while the Interstate Commerce Commission delivers edicts to the effect that one industry shall continue in business and another shall not. There never will be confidence in Government so long as Government practices discrimination, and the object of Government control invariably and inevitably is discrimination.

"The belief of the reactionaries is that Government should not function more widely than it did in the past, but they seem to forget that the fundamental of our plan is equal rights for all and special privileges for none." Then the candidate goes on to admit that inequalities have always appeared, but they are due, he thinks, to "mischievous spirits." That is the trouble. The theory has never worked in practice. But even the theory is not right, because the fact is that the reason given for almost every recent usurpation of power by the Government was the necessity for practicing discrimination that in ordinary circumstances never would be permitted. The railroads appealed for help to the Interstate Commerce Commission in order to be permitted to practice discrimination. A restoration of the Fuel Administration, which is

being called for, would be for the purpose of practicing discrimination. It is this "government by an industrial cabinet" group that comprises the real reactionaries.

There are various definitions of "reactionary." If it be reactionary to follow the warning of Washington against foreign entanglements, if it be reactionary to stand for minimum instead of maximum government, if it be reactionary to want responsible instead of personal government, many Americans will proudly acclaim the fact that they come within the definition. We do not believe that a thing is progressive because it is a change, or that movement is always going ahead. Freedom and liberty require careful guarding. The natural tendency of mankind is backward, not forward. A comparatively few leaders keep civilization "up." Government tends to become autocratic, bureaucratic, a pap-dispensing machine. Some things called progress today were called progress by Romans who were using them to entrench themselves in authority as Caesars. None talked more about the people's rights and the extension of consideration for the masses than did the first Caesar and that great usurper Augustus. But when the Romans came to find out what all this so-called progress meant, they found that they were the subjects of an emperor. The Caesarism then begun became the Kaiserism which 20 centuries later we had to fight.

We look in vain through Governor Cox's speech for approbation of and allegiance to those basic democratic principles which the founders of the Government incorporated in its institutions because they had been close to the sort of government that taught them the necessity of having a different sort of government. It is a time when packages marked "progress" should be examined to see if they are not in fact dynamite bombs.

INCREASED EFFICIENCY ONLY SOLUTION OF PRESENT ECONOMIC CONDITIONS AND PROBLEMS OF UNREST.

GRANTING that there have been a multitude of contributing causes, yet back of the high cost of living and unrest prevailing among all classes stands underproduction in large outline. Modern society has reached a point where it no longer merely expects comfort and convenience in working conditions, but it demands them, and also counts as necessities what were once considered luxuries of life, and it requires enlarged output to meet these requirements for a higher plane of living.

Therefore, today our needs call for a much greater production to supply them than the production that was necessary to fill the wants of former generations. We are constantly calling for more when the tendency of the majority in recent years has been to do less. The destruction and disorganization caused by the World War merely intensified the situation and brought it to a crisis.

The world is short of materials. Food scarcity to the starvation point in some countries made the people susceptible to the uneconomic, godless theories of Bolshevism. Its transportation systems, disorganized by the war, are underproducing. There is shortage of credit. The world has not regained strength to fully restore its shattered nerves to normal. It also sadly needs a quickening of the Christian spirit among men. The world is underproducing in religion as in everything else.

Only by greater work and increased efficiency can these conditions be overcome. Business men, manufacturers and labor, in some quarters, have seen the light and are beginning to advocate increased efficiency in every line of industry. Increased efficiency in plant management as well as in other labor is being sought. Several weeks ago the MANUFACTURERS RECORD outlined the views of a Baltimore manufacturer who,

by improved shop practices and installation of labor-saving machinery, is cutting production costs by increasing his output on some operations as much as 50 per cent, and expects within two years to have increased his output 100 per cent without increasing the working force of his plant. Many manufacturers are working toward greater output and decreased operating costs, believing that to be the only sound way to reduce living costs and allay the specter of discontent hovering over the land.

In this connection, Merrill B. Parker, sales engineer, of Chattanooga, commends the statement of Samuel Gompers, who, in referring to the additional \$600,000,000 the railroads must raise to meet the recent wage advance made by the Railroad Wage Board, said:

"It does not seem to have occurred to either the Government or the railroads that it might be possible to increase railroad operating efficiency to a point that would eliminate the extra cost.

"I venture to say that it is possible to so increase the operating efficiency of the railroads as to not only afford a proper wage to the workers, but to allow a proper return to railroad investors."

On the foregoing Mr. Parker makes the following comments:

"It is not often that I can agree with Mr. Gompers. For once he is right. To use a colloquial expression, more expressive than elegant, he has 'said a mouthful.' He is on the right track, with a clear board and nothing to do but make his suggestions a reality by making efficiency the slogan of the unions and substituting efficiency for the 'card' and 'label.' Eliminate the walking delegate and substitute in his place the clear-brained, straight-thinking efficiency expert. Weed out the idlers and incompetents, send them back to the farm, whence most of them came and where they are so badly needed. Put the workers on an efficiency basis, Mr. Gompers. Inculcate loyalty and esprit de corps among them.

"Judge Gary cites an instance in which, he said, in order to remove and replace a headlight on a locomotive it has been necessary to employ four different men because of labor regulations, where one man heretofore performed the same service in less time. There are hundreds of similar wastes that can be remedied, and who is better qualified to point them out and remedy them than the workers themselves?

"Mr. Gompers and those under him have a wonderful opportunity presented them for saving the railroads, and saving hundreds of millions of dollars for the public. Raise the efficiency of the workers and then demand a living wage, and the public, which has been swinging away from the down-trodden rail workers recently, will see that justice is done them.

"But why confine this suggestion to the railroads? Apply it to all industries. A wonderful opportunity, indeed, is afforded the great labor leaders for doing constructive work, the results of which would benefit most of the workers as well as humanity at large."

Mr. Gompers is right in asserting that there is room to increase efficiency in railroad operation, but he has done his utmost to lessen efficiency and to create a spirit of unrest. Mr. Gompers preaching efficiency of work would match the devil preaching piety. If Mr. Gompers could make union labor discard its false doctrine of restricted output, whether in transportation or other industries, he would accomplish something.

Above everything else at the present time, all our energies should be centered on reducing costs to the consumer. To accomplish this, underproduction must be met by increased efficiency in every line of work. Raising of wages in particular industries for the workers of those industries to meet living conditions is not the way to reduce the cost of living for the whole public. More work on the part of executives and labor, increased plant efficiency by the installation of new shop appliances and adoption of time-saving practices in machine manipulation and plant operation will insure increased output at reduced operating costs, making possible a reduction of prices for the benefit of the consumer. But will Mr. Gompers ever lead a campaign for betterment in that way?

MODERNIZE AND EQUIP ALL BUSINESS INTERESTS WITH IMPROVED MACHINERY AND APPLIANCES AS A PARTIAL SOLUTION OF THE LABOR PROBLEM.

THERE is great room for increased efficiency of labor—and in this line we include every man who works with brain or brawn, whether on the farm, in the factory, in the office or in the store, in the teacher's chair or in the pulpit, for all are laboring men. Nevertheless, in strictly manual labor and in a great deal of brain work new equipment and modern methods would vastly increase productive power.

Every business office should be supplied with the most modern conveniences for lessening the work of bookkeepers and other clerical help. Every school should be provided with the things which lessen the drudgery of much of the teacher's work or increase his facilities that he may do greater work with less strain. Every home should, as far as possible, be equipped with modern electrical or other appliances for lessening the drudgery of the women of the family. There are innumerable improvements and machines which can be introduced into family work which would increase the power of those who labor and greatly lessen the strain, giving them larger time for other things.

When we turn from what may be called the small things of the office and the home into the larger business operations of the day, there is a limitless field for improved methods and modern equipment. No factory manager should be satisfied that he has reached the full measure of plant equipment until he has made the most thorough study of every machine in his shop, and of its location with reference to other machines, and of every machine which might by any possibility be used to increase his output and lessen the labor involved.

Muscle must be supplanted to as large an extent as possible by mechanical power. There are few plants in the country that could not be benefited by some changes and by the introduction of new methods and new equipment.

The volume of work to be done will enormously expand from year to year. The growth of labor supply will increase very slowly.

The world's business will be halted by inadequate labor supply, as the business of our country is being halted by inadequate credit supply, unless the shortage in labor can be solved by improved equipment.

The demand for labor must of necessity, under present conditions, grow more rapidly than the supply. This can be met only by new mechanical appliances which will double or quadruple the efficiency of the men employed. This will not lessen the rate of wages; and it should not do so, for any effort to reduce wages is a wholly false basis for development. High wages should continue, and the man who undertakes to break down wages is making a bad blunder. But the cost of production can be very greatly decreased without interfering with wages by increased output through more modern equipment.

Railroads lack not only cars and locomotives and track, but modern equipment for the loading and unloading of cars. Their terminal facilities are in many respects inadequately supplied with modern machinery. A vast amount of work is now done by hand in loading and unloading cars which could be done by machinery; and as one watches the unloading and loading of many cars in many places he marvels that the railroads have not found a better way to do these things.

The inventive genius of the country must be turned with greater force than ever into helping to find a way to increase the nation's output commensurate with the nation's needs, based on the assurance that there cannot be any large increase in the labor supply for many years to come.

Commenting on some phases of this situation as discussed in the MANUFACTURERS RECORD from time to time, Mr. C. W.

Garrison, the advertising manager of the Lakewood Engineering Co., Cleveland, O., writes as follows:

"We are of the opinion that the labor shortage is not really a shortage of men. It is rather a wrong application of the men we have. In our industrial plants throughout the country we find an average of three or four men being used to move material.

"In practically every case one man with the right kind of machine could do the work of at least three or four men. In so far as the railroad car situation is concerned it is a well-known fact that most of our cars are loaded and unloaded by hand. When coal is handled by hand it easily requires two men two days to unload one car. A surprisingly few number of executives realize that a car of coal can be unloaded in three hours or less with the right kind of equipment.

"It seems to me that something must be done quickly to get the American executives to thinking about greater use of machines that will increase production per man. If a machine and one man can do the work of four men, we have three men released for other work. Applying this generally, it would take a comparatively short time to relieve the so-called labor shortage.

"If we were to save one hour per car per day in loading and unloading railroad cars, the saving would be equivalent to 102,000 new cars. It has also been suggested that by more careful loading of freight cars so that each car would have an additional load of one ton, it would be equivalent to having at least 90,000 new cars in service.

"As you are well aware, the Pennsylvania Railroad figures approximately 400 cars a month that will be broken. This, I believe, was an average figure per month taken from their records covering a number of years. This same condition exists on every railroad. It is impossible for the railroads to purchase new cars fast enough to replace the cars that are being broken monthly. Not only are the shops unable to produce the required number of cars in a short time, but the railroads are unable to finance the purchase of such an immense number of cars.

"We must realize, therefore, that the car situation is going to present its problems not only for the next two or three months, but for at least the next three years. Some strenuous measure should be taken to make American industries realize that they are face to face with a problem far from being temporary. The only possible way of relieving the tangle is immediate action toward replacing man power by machines, thus increasing production per man and make possible the handling of material more quickly.

"Anything you can do to bring these suggestions to the minds of your audience will, I believe, be another service for which this country owes to the MANUFACTURERS RECORD a debt of gratitude."

THE SOUTH'S EDUCATIONAL STANDING COMPARED WITH OTHER SECTIONS.

DR. JOSEPH S. STEWART, editor of the High School Quarterly, University of Georgia, Athens, takes issue with certain odious comparisons of the South's relative standing in education with other sections which were made by a Mr. Ayres at an educational meeting in Washington. Dr. Stewart sets forth certain facts in his editorial in the High School Quarterly in justification of the South's educational efforts which show that the South is not given a square deal in many reports of this kind.

Granting that the figures which place the South at the bottom of the list by combining both white and blacks are substantially correct, Dr. Stewart asserts they do not show the facts regarding white education or all the facts due to the credit of the South.

In the increase in the number of pupils enrolled in public schools since 1870, Dr. Stewart says the Southern States have had to meet an enormous increased attendance, varying from three to seventeen-fold, which is out of all proportion to the increase in taxable wealth or population. Compare this increase with the New England States of Connecticut, Maine, Massachusetts, New Hampshire, Vermont and Rhode Island, which, he says, with practically no more pupils to teach since 1870, have largely increased revenues. According to Dr. Stewart, these six States, with vastly greater wealth and practically a stationary school population for 50 years, pay from 26 to 39 cents per pupil for each \$100 of taxable property, while

the 13 Southern States, with less wealth and increasing enrollment, pay from 18 to 24 cents per pupil, white and black, for each \$100. Further facts along this line are given in the editorial as follows:

"Over half the States have over \$10,000 worth of taxable wealth per pupil. Only two of the Southern States had over \$5000 of taxable wealth per pupil in 1912. Nevada has \$39,000 of taxable wealth per pupil, yet she spends only 14 cents per pupil for each \$100 of wealth. Georgia now pays one-half of her total revenue to the public schools. Think how great the difficulty must have been in 1870.

"Suppose we examine white illiteracy South and North—not native whites, but all the whites, foreign born and native. The figures are not so far apart then and bear out the experience of the army draft. There has been enough hiding behind the "native" white figures. The white illiteracy figures follow: Alabama, 7.9 per cent; Arkansas, 6.2 per cent; Florida, 5.9 per cent; Georgia, 5.2 per cent; Kentucky, 6.7 per cent; Louisiana, 14.22 per cent; Maryland, 5.3 per cent; Mississippi, 7.5 per cent; North Carolina, 7.8 per cent; South Carolina, 8.9 per cent; Tennessee, 6.6 per cent; Texas, 14.9 per cent.

"For New England States with a stationary population the figures for white illiteracy are: Connecticut, 5.5 per cent; Maine, 6.5 per cent; New Hampshire, 5.8 per cent; Massachusetts, 4.6 per cent; Rhode Island, 6.6 per cent; Vermont, 4.6 per cent. Not so bad, is it? In the meantime, the Southern white man has reduced the illiteracy of the millions of negroes from 100 to 30 per cent and less.

"If we look at the high-school figures, the results are equally surprising.

"Seventeen Western and Northern States reporting to the Bureau of Education show 10.08 per cent of the white population in the public high schools, and the four Southern States show 8.99 per cent in the public high schools.

"Only 1.67 per cent of the negroes in these Southern States are in the high schools. This is because of the present economic and educational development of the negro. The high school will come in time.

"Now, by combining these two, the South is put down with only 4.3 per cent in the high schools, which is manifestly unfair to the Southern white child. Why can't Mr. Ayres show some diagrams of comparison of white and colored separately for all the States, as is done with native and foreign born? It must be remembered, too, that the South had to build its elementary school system since the Civil War, and that only during the last 15 years had she developed her high schools.

"The figures for 1870 tell the story of the South's desolation after Reconstruction was over.

"The North after the war might be compared to the United States after the World War, rich in profits, while the South could best be compared to Austria or Serbia, with the added loss of its money and bonds and wealth in slaves, together with the burden of educating the negro as well as the white after the desolation of Reconstruction. The wonder is that there is not a greater difference.

"We have not done all we hope to do, though the present census will show marked improvement, but we are not ashamed of our record.

"I was but a boy in 1870, and have lived through and have witnessed the struggle of the South to rebuild and preserve her white civilization and regain her wealth, rebuild her colleges, establish her free schools and take her accustomed place in the councils of the nation. It is an epic story, and some day it will be told and read of all men."

The South is constantly put on the defensive to protect itself from half-baked conclusions drawn against it through ignorance or malicious intent. All who are guilty, intentionally or unintentionally, of casting aspersions upon the South and its advancement have failed to take into consideration the first basic fact that the South in 1865 was a despoiled country, with its people in poverty and under subjection. They ignore entirely the years of Reconstruction and attendant evils. The MANUFACTURERS RECORD would urge upon all who might be tempted to express opinions formed from immature information that belittle the South's efforts in comparison with achievements of other sections that they study the situation and familiarize themselves with the South's condition after the days of Reconstruction so that they will not be placed in a false position by making silly misstatements.

THE FUNDING OF OUR FOREIGN AND DOMESTIC LOANS.

PRESIDENT HARRIMAN of the Harriman National Bank, in a letter to the MANUFACTURERS RECORD writes:

"I cannot but feel that you will be interested in the enclosed copy of the current advertisement of the Harriman National Bank, bearing a suggestion of very deep interest to the mercantile community and to the taxpayer.

"I should be very glad to have your expression of opinion concerning the solution offered.

The advertisement to which President Harriman calls attention is as follows:

"Financial opinion of weight, right or wrong, is under the impression that the restriction placed upon credits by the Federal Reserve Banks at the present time is primarily due to the congestion of rediscounts of Liberty bond loans carried for member banks, resulting from the well-remembered urge to buy bonds liberally and borrow from the banks.

"A suggestion: The relief of this condition, it seems to the Harriman National Bank, could be readily accomplished by a conference with England and France, looking to an agreement whereby the Allied debt of \$10,000,000,000 owing the United States, now in the form of promissory demand notes, could be changed into obligations of fixed maturity, at terms and rate of interest which the Allies could meet, and the new securities offered to American investors.

"That these securities at a suitable price would be absorbed is attested by the recent over-subscription of such new flotations as Armour & Co., General Motors and the Swiss Government. As the foreign securities were sold, the proceeds could be applied to retirement of a like amount of Liberty bonds, thereby relieving the Federal Banks and releasing credit for use in trade.

"An equally important result would be the reduction of the Government debt from approximately \$25,000,000,000 to \$15,000,000,000, with a correspondingly large saving to the public in taxes that fall upon us to pay Liberty bond interest.

"Is this not the way out of the congested situation?"

We do not agree entirely with this advertisement that the restriction upon credits by the Federal Reserve banks was primarily due to loans on Liberty bonds. It is true that the Federal Reserve Board has sought to force all Liberty bond loans out of the banks, but at the same time it has been moved by a spirit of drastic deflation, and some of its members have boasted that this deflation has reduced prices and that was the object of the Board's campaign.

The Reserve Board became impressed with the idea that its chief work should be to lessen the prosperity of the country and to break down the volume of business, as we were having too much prosperity, and one leading banker, in a letter to the MANUFACTURERS RECORD commending the action of the Federal Reserve Board, said: "We must force Liberty bonds out of the banks and into the strong-boxes of big estates and big insurance companies and get back to normal business conditions." Apparently normal business conditions as viewed by many bankers has been to bring about less employment, smaller wages and lower prices, thus doubling the difficulties of this country in carrying the debt incurred on the basis of high prices.

We do, however, agree with the suggestion made by the Harriman National Bank to the effect that the loans made to foreign Governments should be funded into long-time obligations, giving to the foreign borrowers ample length of time to pay the obligations without any strain upon their resources. These obligations, endorsed by this Government, would then be absorbed by the public. We would add to this, however, the suggestion that all the bonds issued for carrying on the war should also be funded into long-time obligations, thus lessening the strain upon this country in meeting problems of the hour and paying off obligations which should be borne to a large extent by future generations.

The war was fought to save this country from eternal damnation under German domination. Generations yet unborn will share in the benefits of the struggle which this

generation has made to save civilization from German barbarism, and it is entirely appropriate that the next generation and the generation after that should help to pay the cost of being saved. Moreover, the increase in wealth which would be stimulated by the long-time funding of our bonds would of itself take care of these future bond payments practically without throwing any strain upon the nation. We could thus eliminate much of the heavy taxation which now hampers and retards the expansion of our activities and burdens the country with exorbitant taxes.

With all bonds funded over a long term, and the loans to foreign Governments funded in the way suggested by the Harriman Bank, and which others have also suggested, there would immediately be a quickening of the activities of the country, helping us to find the ten billion or more dollars which should be expended upon our railroad expansion and enable us to carry without difficulty all of the burdens brought upon us by the World War. It would be most unfortunate, however, if, in handling problems as great as these, the Federal Reserve Board should be under the direction of men, it matters not what may be their party, Democrats or Republicans, not broad enough and big enough to comprehend the handling of such vast responsibilities. The Board as now constituted is not equal to that task, and the nation is paying the penalty to an extent that burdens the very existence of business.

THE LIQUOR TRAFFIC IN THE POLITICAL CAMPAIGN.

"THE liquor interests of New Jersey are attempting to line up the wet interests of the State in support of Cox and Roosevelt, according to Joseph H. Buckridge, secretary of the New Jersey Federation of Liquor Interests. Mr. Buckridge also announced yesterday that the liquor men would take an active part in the campaign this autumn and will work for the election of national and State legislators friendly to them, regardless of party affiliations.

The wholesalers' and retailers' associations in New Jersey have voted to continue their associations under the old names. Both associations will exert all their remaining influence for the Democratic national ticket."—New York Tribune.

The foregoing from the New York Tribune may or may not be true as to the intention of the liquor interests in the matter of their Presidential vote, but it is unquestionably true that the liquor interests will exert their utmost influence in the election of national and State legislators. The liquor traffic in all of its wide ramifications realizes that if prohibition can be maintained in America for a few years the whole liquor traffic will be forever doomed in this country, and its destruction in America would mean its ultimate destruction throughout the world.

Prohibition has proved a tremendous economic success. It has lessened crime and increased production. It has received the hearty approval of the leading business men of America. It has turned the money that heretofore went into the saloons for liquor into shoes and groceries and clothes for wives and children. Purely as an economic measure, and without regard to the moral side of it, although the moral side should always be given the first consideration, prohibition has proved a blessing of unspeakable value to this country. In view of the determination of liquor men to take an active part in the campaign and to do their utmost to control legislation, it is incumbent upon every man who loves his country and loves humanity to do all in his power to overcome the influence of the liquor business and to sustain prohibition.

It is to be regretted that neither party had the honesty and the courage to come out openly and make a stand in behalf of out-and-out maintenance of prohibition in its platform, but Cox at least has for years been a liquor advocate and was nominated by the power of the liquor interests and the corrupt element of Tammany Hall. What an unspeakable pity!

FRANCE AS AN EXAMPLE TO AMERICANS.

AN inspiring story of the recuperative work that has been done by France appears in a recent issue of the Engineering News Record, written by Editor E. J. Mehren, who is now in France making a careful study of the reconstruction progress under way in that country.

On the highest heap of debris of brick and stone and concrete which marked the spot where once the Town Hall of Lens stood, Mr. Mehren read the sign: "Lens will rise again." And what he saw in France voiced not only that Lens will rise again, but that all France will rise again. Indeed, France has already arisen to an amazing extent.

France, according to Mr. Mehren, is not only arising from her ruins, but she is earning the admiration which she won in her recovery in the seventies and in her stubborn resistance in the four years of the war against the accursed work of Germany. In less than two years after the cessation of hostilities 43 per cent of the battle-scarred, desolated farming land was producing crops prior to May 1, and the additional land put under cultivation since that date has probably raised the percentage to 60 per cent or 65 per cent.

On June 20 an official document issued in France showed that the ten devastated departments overrun by the Germans, and apparently forever destroyed, were even then producing enough cereals for their own needs, and may, in fact, be able this year to send a surplus to the rest of the country.

The villages, of course, are still in ruins. The industries are barely getting started. The peasants are living in all sorts of improvised shelters from tarpaper-covered shacks to old army barracks and corrugated iron-roofed huts. For many years Mr. Mehren thinks they will live in these temporary dwellings, not stopping long enough to build homes, but in the meantime they will be at work. They are at work now producing wealth. They know no union hours. They are not complaining. They are just doggedly at work pulling their destroyed territory out of the chaos in which it was engulfed. The region that seemed dead has been reborn. The life that was gone has returned. The upheaved soil, plowed by shells, is now being plowed in a better way and beginning already to produce good crops.

If the same spirit which is remaking France could be reborn throughout all America, this nation would soon teem with productivity which would bring forth a harvest of prosperity such as the world has never seen. Many of the farmers of America, like the farmers of France, are working from dawn until dark. One cannot ride through the farming districts without being struck with the intense eagerness with which the farmers are trying to cultivate and save their crops. Long before sunrise they are in the field, and long after sundown they are still busily at work. If the rest of the people of the country were working like the farmers are doing, there would be no shortage, and, indeed, there would scarcely be much shortage in transportation. If the railroad men were working with the intensity of soldiers, realizing the responsibility of the job in which they are engaged, there would come a sudden shifting of the scene. Cars would move more rapidly, cars would be unloaded in shorter time, and trains would move with better regularity. If into the 2,000,000 railroad laborers of the country there could be breathed the breath of that life which animates France just for one year in which to test out the possibilities of this reborn spirit that once existed in America, many of our transportation problems would suddenly disappear. It is true we lack transportation facilities, but men of initiative and of tireless activity would almost double the usefulness of existing cars and tracks. Would that France's spirit might be abroad in other places than on farms in America!

In giving some details in regard to what is being done toward the restoration of France, Mr. Mehren says:

"The population of the 10 destroyed departments, reduced on November 1, 1918, to 1,944,000, has risen (as of April 1, 1920) to 3,967,000.

"Life has been resumed in 4000 communes where it was extinct, or practically so. Of 6445 schools before the war, 5345 have resumed their duties, generally in temporary buildings.

"Nearly 1700 co-operative reconstruction societies have been organized, and 141,000 persons are engaged in reconstruction operations.

"Out of 3,950,000 hectares of land to be restored, 3,339,000 had, on May 1, 1920, been freed of projectiles. 2,780,000 had been cleared of barbed-wire entanglements and 1,680,000 had been plowed for the first time. The progress in the seven weeks since these figures were compiled has probably brought the plowed percentage to 60 or 65.

"Of 265,000,000 cubic meters of trenches, 156,000,000 had been filled, and of 300,000,000 meters of barbed-wire entanglements, 203,000,000 had been taken up. A total of 15,350,000 cubic meters of debris had been disposed of out of a total of 41,000,000 cubic meters.

"In all, 297,000 houses had been totally destroyed, and 277,000 more damaged. Of the latter, 185,000 had been put in livable condition. Moreover, 28,500 wooden huts, 28,200 temporary wooden houses of fair construction and 16,800 temporary houses of brick, concrete slabs, etc., had been erected.

"Of 51,447 km. of highway needing repair at the time of armistice, 17,789 had been put in temporary condition and 2245 had been completely restored. Seventeen hundred culverts and bridges out of 3168 had been replaced, most of them with temporary structures.

"The main-line railroads, whose length I have been unable to secure, had been completely restored, as had also the canals. The branch railway lines to the extent of about 60 per cent had been put in condition to permit operation, and some 391 km. out of 2386 had been completed. Of industrial establishments, 2627 out of 3508 had resumed operations by May 1. Production is not at pre-war capacity, but the wheels of industry are again moving.

"All this France has done by herself—practically unaided. She has done it because of the energy and devotion and courage of the people of the devastated regions, backed by the whole of France.

"I was awakened by carpenters at 7 in the morning; I saw them rebuilding industrial plants as I went in to dinner at 7 in the evening.

"The peasants stop only at nightfall.

"Yes, 'Lens Will Rise Again.' France is rising—rising rapidly."

GOVERNMENT NOT A SELF-PERPETUATING CHRISTMAS TREE.

THOUGH having its waves of crescendo and diminuendo, there is a never-ceasing clamor in the land for public ownership of transportation lines and utilities. One of the most prominent planks in the platform of that aggregation of addepleted "forward-lookers," the Committee of Forty-eight, declared for public ownership of not only transportation lines and public utilities, but about everything that lies outdoors, in the ground or out of it, and an element of organized labor has ever been insistent on trying out the vagaries of the theorists, the college professors and the reformers, who, without ever having had to provide a payroll or earn a dividend, have it all figured out just how the business of the world ought to be conducted.

The great trouble with these disturbers and agitators is that they put in so much time in talk that they have none left for investigation and thought. History, precedents and the experience of others count for naught with them. They ignore all these; they shut their ears to the trumpet-tongued warning of yesterday's failures, and continue to thrust their half-baked opinions into the faces of the burden-weary world.

Commenting on this situation, the Black Diamond quotes the testimony of Ole Hansen, with prefatory remarks as follows:

"Advocates of Government ownership of coal mines, railroads and other public or semi-public utilities may learn a lesson from Ole Hansen, lately Mayor of Seattle, Wash. Every American, and many who are not Americans, know who Ole Hansen is. He is the man who stood for law and order when the I. W. W. threatened his city. He is a sterling American; none better.

He used to believe in Government ownership. Here is what he says about it now:

"Men became candidates for office with no other assurance than the fact that they were for municipal ownership. When the time came to take care of the utilities in a business way they were always found on the side of cutting the rate to the men who used the power or light, and, by camouflage, apparently showed a profit.

"We submitted the purchase of the street-car lines to a vote of the people. They were purchased for \$15,000,000. We did everything possible, speeding up the cars almost to the danger point, to make the street-car lines pay. The right thing to have done would have been to have the public pay a sufficient increase commensurate with the cost of hauling, especially as we had to reduce the principal and pay the interest.

"The street-car men threatened to strike. I asked them for God's sake to strike so that we could get rid of some of the poor men. Under the civil service we could not discharge them. Well, they did not strike.

"Just as soon as the primaries began to get near, candidates promised to force through extensions when there was no reason for the extension, and no way at any rate of fare where the municipal street-car line could carry even the interest charge on the extension.

"I cannot believe, from my experience, that the public utility which employs any large number of men or which has a large amount of capital can or will function as a publicly operated utility as well as does a private corporation which has individual reward at the end of the day. Nor do I believe that the cities of the nation or the Government of the nation will ever be willing to pay for brains.

"The time has come when we have got to come right out and tell the truth to the people, and let them understand that the United States Government is not a self-perpetuating Christmas tree for the benefit of anyone. If we want to make the American Government a kind of pickpocket, the way to do is just to confiscate these great properties throughout the country. I believe that every public man's work in this country is to see that investors get justice, and at the same time see that the public gets adequate service rendered at a fair price."

FLORIDA NEEDS TO DEVELOP ITS WATER TRANSPORTATION POTENTIALITIES.

West Palm Beach, Fla., July 20.

Editor *Manufacturers Record*:

I wish to thank you for your article on the cover-page of the issue of July 15. After reading this, some of the reasons for existing conditions here are made plain.

For years the only railroad on the East Coast has been unable to handle the business that Cuba and this section supplies. Cuban freight seems to have the preference.

This condition has caused many that formerly produced for Northern markets to stop, and more and more are following suit.

Talk of more railroads is to be heard on every hand, but your article makes it plain that rails without rolling stock are of no benefit to the congested sections they are supposed to relieve.

The opening of the St. Lucie inlet would solve the problem for the east central and southern part of the East Coast. The Government has appropriated \$300,000 for this work; why it has not been used we cannot understand. Can it be that the railroad does not want competition and in some way has blocked the work?

With an opening into Manatee Bay so that ocean-going vessels could make this a point of call, it would give the railroad a short haul which for a time perhaps it could handle. It would also open a business so that boats now rotting for the want of something to do could be put to work. It would not be long after this was done before the Government would put a canal from Manatee Bay to connect with the St. Lucie Canal, only four miles inland, and vessels bound for Gulf ports would save between 600 and 700 miles by using this cross-State waterway.

I believe that you could cause some action to be taken so that the inlet would be promptly deepened. If you will, you will be doing the State the greatest possible good, as you will cause the growing of foodstuffs sufficient to feed the country in a section that cannot do anything unless surer and prompt transportation can be had.

That you may see some way whereby you can put the power of your publication behind this most worthy project is the earnest desire of those who seek an immediate relief for the now almost hopeless condition that the lack of transportation causes.

C. B. BURROWS.

A few years before Mr. Flagler's death we published an authorized interview with him in which he said that, realizing that traffic would grow more rapidly than railroad facilities,

he had offered to the East Coast Railroad officials money for double-tracking the entire line, but they felt that with some extra sidings and locomotives this expense could be avoided. "The road is," said he, "already overcrowded with business, and we cannot possibly handle all the traffic now offered us."

Since then the Cuban business has so enormously expanded that the situation must grow steadily worse for a long time to come. Mr. Flagler was one of the men of vision who saw years ahead of others.

Everything that can be done by developing waterways to relieve this situation should be put into effect as promptly as possible. There are great possibilities in water transportation through and from Florida, and the business men of the State should never let up until every possible water-shipping potentiality has been utilized. There should be regular water shipments on a large scale from Miami and other points on the East Coast as well as from the West Coast. Some means should be provided for shipping in fast refrigerator steamers to New York and other ports a very considerable part of Florida's citrus fruit crop and many kinds of vegetables which would stand water transportation.

Florida needs to utilize its unequalled coast length and its great river and canal possibilities to a larger extent, and this need will grow more acute every year.

WHERE AMERICA AND THE ALLIES BLUNDERED.

ONCE more civilization faces the danger of Germany at war and allied with the Bolshevistic forces of Russia in a fight of the united barbarism of the two countries against the world. No one should ever have expected anything else when America and the Allies made the fatal blunder of not going on to Berlin, Constantinople and Vienna. But Germany was playing for time. That the German people had no sense of shame, no conviction of their boundless criminality, and no intention of submitting any longer than they could get ready for another war, ought to have been clearly foreseen by every man who claimed possession of any qualities whatsoever of statesmanship. The whole history of the German race was sufficient proof that Germany in asking for an armistice was merely trying to keep its own country from being invaded in order that it might get ready for another war.

An American officer who, after the armistice, made a careful study on the ground of the German situation for this Government, upon his return to this country said to the *MANUFACTURERS RECORD* that he was convinced that not a single riot or strike had occurred in Germany without the consent or the connivance of the German military authorities. All that had been done, said he, to create the impression of a breakdown of the German military power and a collapse of militarism in Germany was merely a camouflage carried out by Germany's military leaders for the express purpose of deceiving the world while rebuilding their strength for the next great war.

During the entire struggle, from the time Russia collapsed under the work of German spies which filled the Russian Army, and from the time when we turned Trotsky loose under German influence to overturn the Russian Government in order to stop the war against Germany, the *MANUFACTURERS RECORD* warned the world of the danger of the combination of Germany and Russia which would threaten the world's civilization to a greater extent than when Germany's accursed army of barbarians was in sight of Paris, longing for the time when it could loot that city. Those who cried Peace! Peace! when there was no peace; those who demanded that the armistice should be accepted, had a very scant knowledge of the history of the Hun and a very narrow vision of the world situation.

The *MANUFACTURERS RECORD* uttered no word of rejoicing over the armistice. It regarded the armistice as one of the fatal blunders of human history, and we said then, and have

said repeatedly since, that the world would have to shed more blood and spend more treasure many times over than it would have cost to go on to Berlin, and in Berlin and Constantinople and Vienna hold possession of that entire situation until a new generation of people had come to realize that the criminal nation must pay a penalty as great as the individual criminal must suffer for his crimes. But sickly sentimentalism stayed the march of the soldiers, and many American soldiers wept as they realized that they were stopped in the campaign just at the time when they had the Huns on the run.

It matters not who was responsible for the armistice. We were responsible for yielding to it, even if we were not wholly responsible for bringing about the condition which gave to Germany the opportunity of asking for an armistice. Any man in official life in America or in Europe who favored the armistice instead of an unconditional surrender by Germany is to the extent of his influence responsible for all the horrors which the world once more will face in the spread of Bolshevism throughout Europe and throughout this country. America and the world at large now face the most terrific danger that has ever been confronted since in olden days the hordes of barbarians overspread Europe and carried to ruin the civilizations of those days.

HOW TO CARRY FORWARD THE "OPEN-SHOP" CAMPAIGN.

A LEADING manufacturer of Louisville, in expressing his appreciation of recent articles in the MANUFACTURERS RECORD on the open-shop, writes:

"Why do you not get behind a movement to consolidate the several movements throughout the country in favor of the open shop? Something really constructive, permanent and continual should be done. At present it is being done largely by business men here and there who have their hands full with their every-day work. An organization should be formed and an editor-in-chief be employed, with several assistants; speakers should be employed, and the country sown down with literature and speeches in favor of the open shop.

"Manufacturers and merchants and business men in general could far better afford to contribute to such and have it carried on in a systematic way, and it would not cost them any more than it is now costing, and could be done in better style and cover a larger field and be more lasting in its effect.

"I believe that now is the time for such a movement, and it only lacks a leader of the right type."

We do not wholly agree with our correspondent, for, in our opinion, the time has not yet come for an organization such as he proposes if it is to supplant local work. A national organization working in behalf of the open shop would not have one-tenth of the influence which is being exerted by similar organizations operating in individual communities. For instance, the work of business men in Louisville in behalf of the open shop can be made far more effective in that community than would be the work of a national organization which undertook to awaken Louisville to the need of the open shop.

There is another point which needs to be considered. Our correspondent suggests that business men could better afford to contribute to open-shop work if carried on by a national organization than they can to the local organizations now at work in individual communities. In this we think he is in error. Every business man who stands for human liberty and the safety of this Government owes to himself and the community in which he lives to work whole-heartedly for the open shop as the synonym of American independence. If a national organization were in existence seeking to do this work, it could not possibly cover every community as well as local organizations can do, and being far away, the people of different communities would lose interest and fail to contribute in work and money to its cause.

We are inclined, therefore, to the belief that it is the

bounden duty of every man who believes in the open shop to co-operate with others in his community who hold to the same view and thus build up an effective, powerful local organization, the strength of which in public influence would be infinitely greater than would be the work of a national organization.

THE BREAK IN TEXAS COTTONSEED MARKET DUE TO BREAK IN PRICES OF OIL-MILL PRODUCTS AND HEAVY IMPORTATIONS FROM ORIENT.

Texas Cottonseed Crushers' Association.

Dallas, Tex., August 5.

Editor Manufacturers Record:

In your issue of July 29, 1920, is a communication from a correspondent in Austin, Tex., which asserts that the price for cottonseed in Texas is \$20 a ton, and that there seems to be no justification in general market conditions for so low a price for cottonseed.

Had the correspondent investigated the matter by even a casual reading of the market reports for cottonseed products, that item could hardly have been used in your paper. When cottonseed sold for \$80 last season, the price for crude cottonseed oil was as high as 26 cents a pound. At present it is 10 cents or less. A great deal of last season's cottonseed oil is still in the hands of the mills that made it and not moving at any price.

Cottonseed cake was selling a year ago at about \$70 for slab cake, 43 per cent protein, for the cattle feeders needed it and there was drouth over a very large part of the western and northwestern section of the cattle country. Now it is quoted at \$50, with no buyers.

Hulls were taken a year ago at \$9 and better per ton for cattle feed. Today the highest quotation is \$5 and there is no selling. These are figures from the records of sales last year by a well-esteemed broker and prices at which he is now able to get all he wants, because there is no selling demand.

At a conference in Dallas on July 27, 1920, more than a hundred farmers, ginners, bankers, State government officials, industrial organization officers and cottonseed crushers discussed throughout the day the situation as to the market for cottonseed products and the value of the products from a ton of cottonseed. A permanent committee was selected representing all these interests. It reported that \$25 is a maximum price the mills can afford to pay where seed is now moving in Texas, and that \$52.85 is the gross value of all the products on prices at which the products are offered, not taken. Working cost and cost of handling through the marketing of seed was carefully calculated, and by unanimous report this committee submitted its finding that \$25 is the maximum value at the mill for cottonseed.

The meeting unanimously approved the report after full discussion. It was shown that the actual value of the seed for feeding and for fertilizer is greater than the price the mills can pay, and the farmer was urged to hold the seed or to use them, not to sell them to the mills, until such time as the market for products may justify a better price. The committee is to continue its work, and the conference pledged itself to aim for cost and reasonable profit for the farmer as the selling price for all of his products.

This spirit of co-operation, it is hoped, will work out so that the farmer will get what his raw materials are worth and the mill man will take cottonseed on a basis of the value as ascertained from the selling price for the products.

Working cost in the mills includes the cost of labor, based on the wages actually paid; the cost of fuel, difficult to obtain at any price, and the repair and maintenance of the establishment.

Heavy importations of Oriental oils in competition with cottonseed oils and the small export demand for the products in foodstuffs made of cottonseed or other vegetable oils have hammered down the price for oil. The excellence of range conditions and the abundance of feedstuffs of many kinds have cut down the price for cottonseed cake and hulls. Cotton linters are not salable at any price, and large amounts of this commodity remain at the mills.

We append the report from the permanent committee that will work in Texas to see to it that all concerned are fairly treated in whatever marketing may be possible.

It might be of interest to note that 90 per cent of the oil mills in Texas lost money last season, and that many of the mills will not run in the new season soon to begin. Those that do run will find it exceedingly difficult to obtain the requisite finances, even when buying seed at \$25.

When the mill pays \$25, it is generally the case that the farmer will get about \$20, the middleman getting the rest.

ADAMS COLBURN.

Cotton Crop, Including Seed, for 1919-1920

Valued at \$2,516,544,520*

COMMERCIAL CROP OF THE UNITED STATES FOR YEAR ENDING JULY 31, 12,443,180 BALES, AN INCREASE OF 803,527 BALES COMPARED WITH THE 1918-1919 CROP, AND THE LARGEST CROP SINCE 1916-1917.

By HENRY G. HESTER, Secretary New Orleans Cotton Exchange.

The commercial crop of the United States for the year ending July 31, 1920, amounted to 12,443,180 bales, showing an increase of 803,527 over the crop of 1918-19, an increase of 536,207 over that of 1917-18 and a decrease of 497,754 under that of 1916-17.

The increase in deliveries from Texas and the Atlantic States has been partly offset by a moderate falling off in the "other Gulf States," making, as stated, a net increase of the commercial crop of 803,000 bales. The figures, in round numbers, are: Texas, over last year, 417,000; "other Gulf States" (embracing Louisiana, Mississippi, Arkansas, Tennessee, Oklahoma, Missouri, California, Arizona, Kansas and New Mexico), under last year, 93,000; the group of Atlantic States (including Alabama, North Carolina, Georgia, Florida, Kentucky and Virginia), over last year, 479,000 bales.

These comparatives, it must be remembered, refer to the commercial crop, including linters, and not to growth. In other words, they indicate the supply marketed or handled.

The grade of the crop was not up to the average of the previous five years, comparing with previous seasons as follows:

| | |
|---------------------------------------|--|
| 1919-20, strict low middling. | |
| 1918-19, Barely middling. | |
| 1917-18, middling. | |
| 1916-17, middling to strict middling. | |
| 1915-16, middling to strict middling. | |
| 1914-15, middling. | |

In fact, the crop was the poorest in grade since that of 1913-14, accentuating the unsatisfactory conditions incident to an overplus of undesirable descriptions.

The average price for middling cotton for the year was 38.21 cents per pound, comparing with 30.36 last year; 28.86 the year before, and 18.41 in 1916-17.

The average commercial value per bale of lint cotton was \$182.98 against \$155.14 last year, \$147.39 the year before last and \$94.82 in 1916-17.

Values received have been the highest in 53 years, and in order to continue comparisons, the following is reproduced from the last annual report:

"Searching the records since 1827-28, we find that the highest average price reached for middling cotton in the South prior to the Civil War was 19 cents. That was in 1834-35, when the high of the year was 19 cents and the low 11½ cents. Subsequent to the Civil War getting well on into the 'peace period,' the record for middling cotton shows:

| | Highest. Cents per pound. | Lowest. Cents per pound. |
|--------------|------------------------------|-----------------------------|
| 1866-67..... | 42 | 25 |
| 1867-68..... | 33 | 14½ |
| 1868-69..... | 33 | 29¼ |
| 1869-70..... | 32 | 17 |
| 1870-71..... | 21 | 13½ |
| 1871-72..... | 25¼ | 17½ |
| 1872-73..... | 21¼ | 18 |
| 1873-74..... | 19 | 14½ |

"After 1874-75, when the high for middling was 16½ cents, the staple ruled well under that figure, at one time (in November, 1898) touching 4¾ cents, until in February, 1904, it reacted to 16 7-16 cents, which was the high mark until 1916-17."

Aside from conditions incident to a large accumulation of low and undesirable cotton, descriptions which have been a drag on the market, the year has been a distinct improvement. Exports foreign, including Canada, increased over 900,000 bales and were the largest since the season of 1914-15, while consumption increased over 2,100,000 bales, showing a long stride toward the normal. Much remains to be accomplished, but, notwithstanding the unsettled conditions on the Continent of Europe, the outlook is hopeful. Germany and Austria, which have been practically blank since 1914, have been started with about 475,000 bales this year, though this is a trifle compared with their former totals.

*From annual report of the cotton crop of the United States, by Henry G. Hester, secretary of the New Orleans Cotton Exchange.

Belgium, which has imported less than 75,000 bales in all of the past five years, took 184,000 and the Netherlands increased their imports to 124,000 of American cotton. An interesting item is that Liverpool exported to the Continent 122,000 bales of the cotton she imported from the United States. These, while not large in the aggregate, are significant indications of the readjustment in process.

The total value of the crop compares with the previous five years as follows:

| | Bales. | Values. |
|--------------|------------|-----------------|
| 1919-20..... | 12,443,180 | \$2,172,324,368 |
| 1918-19..... | 11,639,653 | 1,710,715,068 |
| 1917-18..... | 11,906,973 | 1,667,788,939 |
| 1916-17..... | 12,940,334 | 1,146,102,225 |
| 1915-16..... | 12,938,256 | 765,700,560 |
| 1914-15..... | 15,108,911 | 593,432,978 |

These values, which embrace the commercial crop, are for cotton only, and do not, of course, include the value of the seed, which constitutes a specially important item. Thus, the value of the crop for the past year, as stated, is \$2,172,324,368; if the value of the seed be added, we should have a total of \$2,516,544,520. Last year, the total value, including the seed, was \$2,045,251,868, and the year before it was \$2,001,682,939.

As indicated by the following approximate data, the quantity of old cotton remaining in the interior of the South shows a decrease. The figures of July 31 were about (in thousands):

| | This year. | Last year. |
|--|------------|------------|
| Southern mill stocks..... | 700 | 665 |
| Counted and uncounted towns and plantations..... | 2,408 | 2,909 |
| Total old cotton carried over in South at the close of the season..... | 3,108 | 3,574 |

Using these figures, the actual growth for the season of 1919-20 was approximately as follows (in thousands):

| | |
|--|--------|
| Commercial crop of 1919-20..... | 12,443 |
| Less old cotton from crop of 1918-19..... | 3,574 |
| Plus cotton of this year's growth carried over in interior July 31, 1920..... | 8,869 |
| 31, 1920..... | 3,108 |
| Add burnt in interior cotton belt..... | 11,977 |
| Actual growth 1919-20..... | 23 |
| Insurance authorities state that 1919-20 "was one of the most phenomenal years with respect to immunity from cotton fires that the underwriters have ever recorded." | 12,000 |

Deliveries of Crop by Groups of States.

| | 1919-1920. | 1918-1919. | 1917-1918. | 1916-1917. | 1915-1916. |
|-----------------|------------|------------|------------|------------|------------|
| Texas..... | 3,097 | 2,680 | 3,221 | 3,941 | 3,374 |
| Other Gulf..... | 3,649 | 3,742 | 4,123 | 4,163 | 3,667 |
| Atlantic..... | 5,697 | 5,218 | 4,563 | 4,837 | 5,897 |
| Total crop..... | 12,443 | 11,640 | 11,907 | 12,941 | 12,938 |

Based on the foregoing, the following indicates about the division of the commercial crop by States in thousands of bales for the past five years ending July 31:

| | 1919-1920. | 1918-1919. | 1917-1918. | 1916-1917. | 1915-1916. |
|--------------------------|------------|------------|------------|------------|------------|
| Alabama..... | 891 | 756 | 521 | 659 | 1,255 |
| Arkansas..... | 899 | 914 | 1,004 | 1,228 | 847 |
| Florida..... | 20 | 34 | 59 | 60 | 60 |
| Georgia..... | 2,037 | 2,029 | 1,980 | 2,164 | 2,329 |
| Louisiana..... | 329 | 541 | 605 | 496 | 493 |
| Oklahoma..... | 825 | 590 | 1,016 | 995 | 806 |
| Mississippi..... | 1,046 | 1,154 | 979 | 974 | 1,101 |
| North Carolina, etc..... | 1,006 | 908 | 717 | 827 | 893 |
| South Carolina..... | 1,743 | 1,491 | 1,295 | 1,127 | 1,370 |
| Tennessee, etc..... | 550 | 543 | 460 | 610 | 510 |
| Texas..... | 3,097 | 2,680 | 3,220 | 3,941 | 3,374 |
| Total crop, bales..... | 12,443 | 11,640 | 11,907 | 12,941 | 12,938 |

†Including Virginia and Kentucky.

‡Including Missouri, California, etc.

The story of the American mills has changed materially since the close of the last commercial year; then, as quoted from one

writer in the Eastern mill section, there was "no question that the mills had all they could do," and it was a matter of spindle capacity restricted only by the labor supply and decrease in working hours; now, after a season of larger trade volume, though not up to that of 1917-18, there is a feeling of doubt and uncertainty as to what the future has in store. In a word, as expressed by one correspondent, "the textile trade is very unsettled and situation discouraging." Tight money, high rates of interest are playing their part with the readjustment of goods prices, which means the enhanced purchasing power of the dollar incident to the return of confidence from war conditions.

It is the same old story; like conditions have, after periods of great national crises, produced like effects, but it does not mean that it is necessarily discouraging in the "long run," though there may be many that "fear so."

There has been an increase during the year in the use of lint cotton North of 116,000 bales and South of 320,000 bales.

The spindle capacity of the North shows little change, but in the South a new era of mill building has set in and there are now in course of erection 35 new mills, with 574,346 spindles, and with the exception of two small mills, containing 5804 spindles, every Southern mill, embracing 15,077,801 spindles, was in operation.

Northern Mill Takings and Consumption. (Including Linters.)

(American Cotton, in Thousands, Year Ending July 31.)

| | 1920. Bales. | 1919. Bales. |
|----------------------------|-----------------|-----------------|
| Stocks beginning year..... | 1504 | 687 |
| Takings, year..... | 2,675 | 2,317 |
| Consumption, year..... | 3,179 | 3,004 |
| Stocks close year..... | 2,660 | 2,500 |
| | *519 | †504 |

*Including 146,000 Northern interior mill stocks.
†Including 151,000 Northern interior mill stocks.

Southern Mill Takings and Consumption. (Including Linters.)

(American Cotton, in Thousands, Year Ending July 31.)

| | 1920. Bales. | 1919. Bales. |
|---------------------------------|-----------------|-----------------|
| Mill stocks beginning year..... | 665 | 628 |
| Takings for year..... | 3,726 | 3,571 |
| Consumption, year..... | 4,391 | 4,199 |
| Stock close year..... | 3,691 | 3,534 |
| | 700 | 665 |

Consumption of foreign cotton by American mills, North and South, has been the largest ever recorded, amounting to 417,000 bales, against 173,000 last year, an increase of 244,000, or 173 per cent.

The figures of linter consumption are as follows (in thousands):

| | This year. | Last year. |
|----------------------------|------------|------------|
| North | 200 | 156 |
| South | 130 | 293 |
| Total North and South..... | 330 | 449 |

Domestic Consumption of All Kinds.

| | Lint Bales. | Linters Bales. | Foreign kinds Bales. | Total all Bales. |
|---------------------------------------|-------------|----------------|----------------------|------------------|
| North | 2,460 | 200 | 387 | 3,047 |
| South | 3,561 | 130 | 30 | 3,721 |
| Total North and South..... | 6,021 | 330 | 417 | 6,768 |
| Total North and South, last year..... | 5,585 | 449 | 173 | 6,207 |

World's Consumption of American Cotton.

Referring to the tabular statement, the world's consumption of American cotton has exceeded last year by 2,135,000 bales, and the year before by 453,000.

Mr. Thomas R. Ellison of Liverpool cables me his estimate of mill stocks July 31 as:

Great Britain, 285,000 of all kinds, including 210,000 American. Continent, 300,000 of all kinds, including 200,000 American.

Mr. Ellison revises his last year's figures by increasing stocks Great Britain American 20,000 and all other kinds 20,000.

Supply and Distribution of American Cotton. (In thousands.)

| | 1919-1920. | 1918-1919. | 1917-1918. |
|--|------------|------------|------------|
| Visible supply, August 1..... | 3,177 | 1,832 | 1,504 |
| Stocks Continental ports not included in visible | | | 50 |
| Brought into sight..... | 12,433 | 11,724 | 12,222 |
| Total supply..... | 15,610 | 13,656 | 13,776 |

DISTRIBUTION.

| | 1919-1920. | 1918-1919. | 1917-1918. |
|---|------------|------------|------------|
| Takings: | | | |
| American mills—North | 2,675 | 2,317 | 2,383 |
| American mills—South | 3,691 | 3,534 | 4,304 |
| Canadian mills | 222 | 202 | 258 |
| Mexican mills | 5 | 3 | 12 |
| Japanese and Chinese mills..... | 893 | 809 | 606 |
| European mills | 5,369 | 3,607 | 3,773 |
| Total mill takings..... | 12,855 | 10,472 | 11,844 |
| Burnt at ports..... | 1 | 7 | ..... |
| Visible Supply Close July: | | | |
| In America | 1,461 | 1,929 | 1,585 |
| In Great Britain | 814 | 784 | 183 |
| In Continent | 479 | 464 | 164 |
| Outside Continental ports not included in visible ..... | ..... | ..... | ..... |
| Total distribution | 15,610 | 13,656 | 13,776 |

Visible and Invisible Supply Close of July. (American Cotton.) (In thousands.)

| | 1920. | 1919. | 1918. |
|---|-------|-------|-------|
| Mill stocks United States close July..... | 519 | 1504 | 1687 |
| Mill stocks in Europe close July..... | *410 | *305 | *250 |
| Total mill stocks, American..... | 929 | 809 | 937 |
| Visible supply, American..... | 2,754 | 3,177 | 1,832 |
| Total visible and invisible supply close July | 3,683 | 3,986 | 2,969 |

ALL KINDS. (In thousands.)

| | 1920. | 1919. | 1918. |
|---|-------|-------|-------|
| Mill stocks all kinds in America close July | 619 | 556 | 747 |
| Mill stocks in Europe close July..... | 585 | *450 | 350 |
| Total mill stocks all kinds..... | 1,234 | 1,006 | 1,097 |
| Visible supply close July, all kinds..... | 4,691 | 4,773 | 3,023 |
| Total visible and invisible supply close July, all kinds..... | 5,925 | 5,779 | 4,130 |

† Mill stocks in the United States embraces Northern mills and Northern interior mill centers. The stocks held by Southern mills July 31 are counted in the old cotton left over in the Cotton Belt and are not included in the commercial crop.

* European mill stocks are estimated per cablegram from Mr. Thomas R. Ellison, Liverpool.
Note.—Mr. Ellison increases his last year's estimate of mill stocks in Great Britain by 20,000 American and 20,000 other kinds.

World's Consumption of American Cotton for Past Year. (Ending July 31.) (In Thousands.)

| | 1919-1920. | 1918-1919. | 1917-1918. |
|---|------------|------------|------------|
| Visible and invisible beginning year..... | 3,986 | 2,809 | 2,929 |
| In sight year..... | 12,433 | 11,724 | 12,222 |
| Visible and invisible supply at close year..... | 16,419 | 14,593 | 15,151 |
| | 3,683 | *3,986 | 2,869 |
| Burnt at ports..... | 1 | 7 | ..... |
| Total world's consumption American cotton | 12,735 | *10,600 | 12,282 |

* European mill stocks revised by addition of 20,000 bales.

Consumption American Cotton by Geographical Divisions. (In Thousands.)

| | 1919-1920. | 1918-1919. | 1917-1918. |
|------------------------------|------------|------------|------------|
| United States—North | 2,660 | 2,500 | 3,111 |
| United States—South | 3,691 | 3,534 | 4,304 |
| Foreign | 6,384 | 4,566 | 4,867 |
| Total American for year..... | 12,735 | *10,600 | 12,282 |

* Revised by addition of 20,000 bales correction in European mill stocks.

American Cotton Crop for Four Years. (For Year Ending Close of July.)

| | 1919-1920. | 1918-1919. | 1917-1918. | 1916-1917. |
|---|------------|------------|------------|------------|
| Port receipts | 7,299,667 | 6,735,598 | 6,406,129 | 7,406,825 |
| Overland to mills..... | 1,674,828 | 1,578,267 | 1,669,667 | 1,512,861 |
| Southern consumption.... | 3,691,005 | 3,533,777 | 4,303,743 | 4,357,085 |
| | 12,665,500 | 11,797,937 | 12,378,929 | 13,277,381 |
| Less taken by Southern mills from ports..... | 222,320 | 158,284 | 471,956 | 336,447 |
| Total crops | 12,443,180 | 11,639,653 | 11,906,973 | 12,940,934 |
| Exports: | | | | |
| Great Britain | 3,059,275 | 2,635,017 | 2,255,703 | 2,650,408 |
| France | 554,944 | 753,059 | 615,801 | 1,001,729 |
| *Continent and Channel..... | 2,751,789 | 2,097,367 | 1,243,713 | 1,872,164 |
| Canada | 222,083 | 202,227 | 258,287 | 197,754 |
| Total exports | 6,588,091 | 5,687,661 | 4,473,504 | 5,731,046 |
| Stock close of year..... | 755,949 | 1,213,170 | 951,104 | 595,945 |
| Northern mill takings.... | 2,674,965 | 2,316,938 | 2,883,140 | 2,957,029 |
| Average gross weight of crop per bale, pounds.. | 510.28 | 511.03 | 510.78 | 512.40 |

* Including to Mexico, Japan and China, details of which are given in export table.

Cotton Consumption in the South.

Year Ending July 31, 1920.

The year has been a busy one for Southern mills, but while the consumption of lint cotton has increased more than 300,000 bales, the total is still 140,000 behind the 1917-18 aggregate. Linter consumption shows a further shrinkage in volume of 164,000 bales.

Every cotton mill in the South, except two small factories, has been in operation, and the erection of new mills and enlargements of old concerns has taken a fresh start. Including old, new and new not complete, our tables show 15,657,951 Southern spindles, an increase of 470,632, nearly all of which will come into play some time during the coming season.

The readjustment of trade and financial conditions incident to the aftermath of the World War is having its influence on the Southern cotton milling industry, inducing doubt and hesitation. Fears of cancellations and requests for postponements in deliveries are more or less embarrassing, but even on a lower plane, which may mean a general readjustment in all lines, the industry is on too safe an economic basis to suffer any serious setback. The severe jolt which led to the recent wholesale shutting down of the woolen mill plants is having a reflex action on other textile lines, but this, it is believed, will prove but temporary in reference to cotton manufacturers which occupy a different plane.

The total number of bales consumed for the year ended July 31 is 3,691,005, against 3,533,777 last year and 4,303,743 the year before, an increase over last year of 157,228, and a decrease under the year before of 612,738.

The year's consumption, compared with last year, consisted of:

CONSUMPTION SOUTH.

| | Lint Cotton. Bales. | Linters. Bales. | Total Bales. |
|---------------|------------------------|--------------------|-----------------|
| 1919-20..... | 3,561,150 | 129,855 | 3,691,005 |
| 1918-19..... | 3,240,268 | 293,509 | 3,533,777 |
| Increase..... | 320,882 | *163,654 | 157,228 |

These totals do not include foreign cotton consumed in the South of 30,381 this year, against 9959 last year.

*Decrease.

Consumption of Foreign Cotton in the South.

| | This year. Bales. | Last year. Bales. |
|---------------------|----------------------|----------------------|
| Georgia..... | 12,439 | 2,442 |
| North Carolina..... | 16,283 | 7,167 |
| South Carolina..... | 1,509 | ..... |
| Tennessee..... | 150 | 150 |
| Virginia..... | ..... | 200 |
| Total..... | 30,381 | 9,959 |

Equal in bales of 500 pounds weight to 32,501 this year and 9503 last year.

Southern Spindles Consuming Foreign Cotton.

| | In operation. |
|---------------------|---------------|
| Georgia..... | 46,620 |
| North Carolina..... | 43,919 |
| South Carolina..... | 11,270 |
| Total..... | 101,809 |

Total in operation, 101,809 spindles, against last year 33,831.

The record of spindles since 1860 is of interest:

Southern Cotton Spindles.

| Year | Spindles | Year | Spindles |
|-----------|------------|-----------|------------|
| 1860..... | 295,359 | 1908..... | 10,661,308 |
| 1870..... | 338,860 | 1909..... | 11,255,787 |
| 1880..... | 561,360 | 1910..... | 11,583,359 |
| 1890..... | 1,819,291 | 1911..... | 11,897,414 |
| 1895..... | 3,177,310 | 1912..... | 12,318,356 |
| 1900..... | 6,267,163 | 1913..... | 12,819,333 |
| 1901..... | 6,531,894 | 1914..... | 13,199,426 |
| 1902..... | 7,512,982 | 1915..... | 13,346,480 |
| 1903..... | 8,248,276 | 1916..... | 13,900,286 |
| 1904..... | 8,615,369 | 1917..... | 14,500,999 |
| 1905..... | 9,205,949 | 1918..... | 14,786,262 |
| 1906..... | 9,760,192 | 1919..... | 15,187,319 |
| 1907..... | 10,598,095 | 1920..... | 15,657,951 |

Roster of Mills.

| | |
|---|-----|
| Total number last year..... | 910 |
| Crossed out and merged into other concerns..... | 6 |
| New and uncompleted added to list..... | 41 |
| Total number cotton mills in the South..... | 945 |

The record of spindles in the South shows:

| | This year. Bales. | Last year. Bales. |
|-------------------------|----------------------|----------------------|
| Total in operation..... | 15,077,801 | 14,955,081 |
| Idle..... | 5,804 | 23,012 |
| New, not completed..... | 574,346 | 269,226 |
| Grand total..... | 15,657,951 | 15,187,319 |

Showing an increase of spindles, active, idle and not complete over last year of 470,632, and a net gain of spindles at work of 122,720.

As indicated by the tables annexed, the total consumption in all of the mills, old and new, for the year was 3,691,005 bales, against 3,533,777 last year and 4,303,743 for the season of 1917-18, an increase over last year of 157,228 and a decrease under the year before of 612,738. The changes in each State as compared with last year were as follows:

| | Increase. Bales. | Decrease. Bales. |
|---------------------|---------------------|---------------------|
| Alabama..... | 46,711 | ..... |
| Arkansas..... | 3,410 | ..... |
| Georgia..... | 93,665 | ..... |
| Kentucky..... | 3,641 | ..... |
| Louisiana..... | 6,594 | ..... |
| Mississippi..... | 4,658 | ..... |
| Missouri..... | 6,836 | ..... |
| North Carolina..... | 113,235 | ..... |
| South Carolina..... | 68,753 | ..... |
| Tennessee, etc..... | ..... | 45,196 |
| Texas..... | 6,372 | ..... |
| Oklahoma..... | 1,306 | ..... |
| Virginia, etc..... | ..... | 152,557 |
| Total..... | 355,281 | 198,053 |

Net increase..... 157,228

The average consumption per spindle in the mills in operation has been 11.40 pounds more than last year, and 4.69 less than the year before.

The comparisons for the past 22 years are annexed:

Average Consumption Per Spindle by Southern Mills.

| Year | Pounds per spindle. | Year | Pounds per spindle. |
|--------------|------------------------|----------------|------------------------|
| 1919-20..... | 116.38 | 1908-09..... | 114.38 |
| 1918-19..... | 104.98 | 1907-08..... | 99.88 |
| 1917-18..... | 121.07 | 1906-07..... | 116.16 |
| 1916-17..... | 130.49 | 1905-06..... | 123.69 |
| 1915-16..... | 124.05 | 1904-05..... | 120.83 |
| 1914-15..... | 111.17 | 1903-04..... | 117.74 |
| 1913-14..... | 111.66 | 1902-03..... | 136.44 |
| 1912-13..... | 114.23 | 1901-02..... | 140.87 |
| 1911-12..... | 109.85 | 1900-01..... | 135.77 |
| 1910-11..... | 99.48 | 1899-1900..... | 154.58 |
| 1909-10..... | 99.21 | 1898-99..... | 162.51 |

The Course of Consumption in the South.

The course of consumption in the South since 1889-90 is shown at a glance as follows:

| | Bales. Consumption. | Increase. | Decrease. |
|----------------|------------------------|-----------|-----------|
| 1889-90..... | 546,894 | ..... | ..... |
| 1890-91..... | 604,661 | 57,767 | ..... |
| 1891-92..... | 686,080 | 81,419 | ..... |
| 1892-93..... | 743,848 | 57,768 | ..... |
| 1893-94..... | 718,515 | ..... | 25,333 |
| 1894-95..... | 862,838 | 144,323 | ..... |
| 1895-96..... | 904,701 | 41,863 | ..... |
| 1896-97..... | 1,042,671 | 137,970 | ..... |
| 1897-98..... | 1,231,841 | 189,170 | ..... |
| 1898-99..... | 1,399,390 | 167,558 | ..... |
| 1899-1900..... | 1,597,112 | 197,713 | ..... |
| 1900-01..... | 1,620,931 | 23,819 | ..... |
| 1901-02..... | 1,937,971 | 317,040 | ..... |
| 1902-03..... | 2,000,729 | 62,758 | ..... |
| 1903-04..... | 1,919,252 | ..... | 81,477 |
| 1904-05..... | 2,111,612 | 192,360 | ..... |
| 1905-06..... | 2,373,557 | 261,945 | ..... |
| 1906-07..... | 2,426,228 | 52,671 | ..... |
| 1907-08..... | 2,246,574 | ..... | 179,654 |
| 1908-09..... | 2,507,440 | 260,866 | ..... |
| 1909-10..... | 2,397,289 | ..... | 110,151 |
| 1910-11..... | 2,351,660 | ..... | 45,629 |
| 1911-12..... | 2,676,433 | 324,773 | ..... |
| 1912-13..... | 2,955,244 | 278,773 | ..... |
| 1913-14..... | 3,093,286 | 138,042 | ..... |
| 1914-15..... | 3,163,388 | 100,102 | ..... |
| 1915-16..... | 4,046,555 | 883,167 | ..... |
| 1916-17..... | 4,357,685 | 311,130 | ..... |
| 1917-18..... | 4,303,743 | ..... | 53,942 |
| 1918-19..... | 3,533,777 | ..... | 769,966 |
| 1919-20..... | 3,691,005 | 157,228 | ..... |

Southern Cotton Mills in 1919-1920.

(Mills.)

| | Total. | In operation— Old. | New. | Idle. | New, not com- pleted. |
|---------------------|--------|-----------------------|-------|-------|-----------------------------|
| Alabama..... | 79 | 74 | 2 | ..... | 3 |
| Arkansas..... | 2 | 2 | ..... | ..... | ..... |
| Georgia..... | 160 | 158 | 1 | ..... | 1 |
| Kentucky..... | 7 | 7 | ..... | ..... | ..... |
| Louisiana..... | 17 | 17 | ..... | ..... | ..... |
| Mississippi..... | 2 | 2 | ..... | ..... | ..... |
| Missouri..... | ..... | ..... | ..... | ..... | ..... |
| North Carolina..... | 414 | 385 | 4 | ..... | 25 |
| South Carolina..... | 201 | 196 | 1 | ..... | 4 |
| Tennessee..... | 25 | 24 | ..... | 1 | ..... |
| Texas..... | 18 | 15 | 1 | ..... | 2 |
| Oklahoma..... | 1 | 1 | ..... | ..... | ..... |
| Virginia..... | 14 | 13 | ..... | 1 | ..... |
| Total..... | 945 | 890 | 9 | 2 | *25 |
| Last year..... | 910 | 880 | 13 | 5 | *12 |
| Year before..... | 889 | 870 | 5 | 4 | *10 |

*Including mills commenced this year and those under this head last year not yet completed.

Looms in Southern Cotton Mills.

| | Active. | Idle. | Not complete. | Total. |
|----------------|---------|-------|---------------|---------|
| Alabama | 20,262 | ... | 1,020 | 21,282 |
| Arkansas | 161 | ... | ... | 161 |
| Georgia | 46,075 | ... | 864 | 46,939 |
| Kentucky | 1,353 | ... | ... | 1,353 |
| Louisiana | 2,018 | ... | ... | 2,018 |
| Mississippi | 4,312 | ... | ... | 4,312 |
| Missouri | 730 | ... | ... | 730 |
| North Carolina | 68,673 | ... | 2,441 | 71,114 |
| South Carolina | 113,202 | ... | 2,230 | 115,432 |
| Tennessee | 5,383 | ... | ... | 5,383 |
| Texas | 3,617 | ... | 311 | 3,928 |
| Oklahoma | 64 | ... | ... | 64 |
| Virginia | 15,768 | 100 | 500 | 16,368 |
| Total | 281,618 | 100 | 7,366 | 289,084 |
| Last year | 285,057 | 732 | 846 | 286,635 |
| Year before | 283,319 | 100 | 1,854 | 285,273 |

Cotton Spindles in the South.

| | Total. | (In operation—) | | New, not com- pleted † |
|----------------|------------|-----------------|--------|---------------------------|
| | | Old. | New. | |
| Alabama | 1,287,324 | 1,197,484 | 4,148 | 85,692 |
| Arkansas | 13,656 | 13,656 | ... | ... |
| Georgia | 2,536,375 | 2,491,179 | 1,792 | 43,404 |
| Kentucky | 97,368 | 97,368 | ... | ... |
| Louisiana | 103,128 | 103,128 | ... | ... |
| Mississippi | 175,106 | 165,106 | ... | 10,000 |
| Missouri | 31,340 | 31,340 | ... | ... |
| North Carolina | 5,270,506 | 4,895,692 | 26,200 | 348,704 |
| South Carolina | 4,974,370 | 4,918,990 | 12,000 | 43,380 |
| Tennessee | 411,472 | 390,668 | 804 | 20,000 |
| Texas | 157,272 | 143,126 | 2,500 | 11,646 |
| Oklahoma | 5,712 | 5,712 | ... | ... |
| Virginia | 594,232 | 577,712 | 5,000 | 11,520 |
| Total* | 15,657,951 | 15,081,161 | 46,640 | 5,804 |
| Last year | 15,187,319 | 14,875,561 | 79,520 | 23,012 |
| Year before | 14,786,262 | 14,561,382 | 50,284 | 13,220 |

†Includes spindles being added to old mills as well as those in new concerns.

‡Including spindles added to old mills less spindles thrown out during the year and new not complete mills of last year which started operations this season.

*Exclusive of 101,809 spindles using foreign cotton, say 46,620 in Georgia, 43,919 in North Carolina, 11,270 in South Carolina.

Southern Consumption of American Cotton.

Year Ending July 31. (Actual Figures Reported by the Mills.)

| States. | No. mills.* | Looms.† | Spindles.‡ | Bales. | |
|---|-------------|---------|------------|-----------|-----------|
| | | | | 1920. | 1919. |
| Alabama | 76 | 20,262 | 1,201,632 | 381,700 | 334,989 |
| Arkansas | 2 | 161 | 13,656 | 13,011 | 9,601 |
| Georgia | 159 | 46,075 | 2,492,971 | 817,020 | 723,355 |
| Kentucky | 7 | 1,353 | 97,368 | 24,661 | 21,020 |
| Louisiana | 7 | 2,018 | 103,128 | 41,214 | 34,625 |
| Mississippi | 15 | 4,312 | 165,106 | 42,178 | 37,530 |
| Missouri | 2 | 730 | 31,340 | 29,459 | 22,623 |
| North Carolina | 389 | 68,673 | 4,921,892 | 1,168,312 | 1,054,977 |
| South Carolina | 197 | 113,202 | 4,930,990 | 847,523 | 778,770 |
| Tennessee | 24 | 5,383 | 390,668 | 120,421 | 165,617 |
| Texas | 16 | 3,617 | 145,626 | 79,650 | 73,278 |
| Oklahoma | 1 | 64 | 5,712 | 8,266 | 6,960 |
| Virginia, etc. | 13 | 15,768 | 577,712 | 117,590 | 270,447 |
| Totals | 908 | 281,618 | 15,077,801 | 3,691,006 | 3,533,777 |
| Less consumed and taken from Southern sea-ports and included in port receipts | | | | 222,320 | 158,284 |
| Net consumption to be added to crop | | | | 3,468,685 | 3,375,493 |

*Mills in operation only. For total in South see other table.

†Employed in mills in operation. For total looms and spindles in South see other table.

‡Spindles working American cotton only. For statement foreign see elsewhere.

Spinners' Takings—United States.
(American Cotton.)

| | 1919-1920. | | 1918-1919. | |
|--|------------|--|------------|--|
| Total crop, United States | 12,443,150 | | 11,639,563 | |
| Port stocks beginning of year | 1,213,170 | | 951,104 | |
| In transit by rail between ports | 44,477 | | 116,895 | |
| In public storage, Northern mill centers | 151,408 | | 164,121 | |
| Total supply | 13,852,225 | | 12,874,773 | |
| Exported during year (American) | 6,866,008 | | 5,485,434 | |
| Sent to Canada | 222,083 | | 202,227 | |
| Total | 6,588,091 | | 5,687,661 | |
| Less linters, etc included in domestic consumption | 20,000 | | 80,000 | |
| Less American cotton returned from abroad | 1,974 | | 80,000 | |
| Total | 6,566,117 | | 5,607,661 | |
| Burnt at ports | 993 | | 7,342 | |
| Port stocks close of year | 755,942 | | 1,213,170 | |

| | | |
|----------------------------------|-----------|-----------|
| In transit by rail between ports | 16,889 | 44,477 |
| Stocks at Northern mill centers | 146,304 | 919,135 |
| | 7,486,245 | 151,408 |
| | 1,400,055 | 7,024,058 |

| | | |
|---|-----------|-----------|
| Total takings for consumption, U. S. | 6,365,990 | 5,850,715 |
| Of which— | | |
| Consumed by spinners in Southern States | 3,691,005 | 3,533,777 |
| Taken by Northern spinners | 2,674,985 | 2,316,938 |

Reference is made to annexed tabular statements.

Average Mill Takings in Bales.

| | This Year. | Last Year. |
|---|------------|------------|
| | Bales. | Bales. |
| Average weekly mill takings—Northern mills | 51,442 | 44,556 |
| Average weekly mill takings—Southern mills | 70,980 | 67,967 |
| Average weekly mill takings—United States | 122,422 | 112,513 |
| Average monthly mill takings—Northern mills | 222,915 | 193,078 |
| Average monthly mill takings—Southern mills | 307,584 | 294,481 |
| Average monthly mill takings—United States | 530,499 | 487,559 |

British Empire Cotton-Growing Scheme of Development.

Manchester, England, July 16.

Editor Manufacturers Record:

The British Empire Cotton Growing Committee has now propounded a great scheme for increasing the supply of cotton grown within the British Empire, and it is proposed, with the assistance of the Government, to put into force without delay several suggestions. The funds will be raised by the voluntary levy of 6d. a bale upon all raw cotton imported, which should bring in about £100,000 a year, and the Government grant of £50,000 a year. It is proposed that the funds should be distributed by a board of trustees incorporated under royal charter. It is suggested that the president of the Board of Trade should be chairman of the board, and that the members should be members of the Departments of State concerned, with an equal number of representatives of the industry. The functions of the board will be to hold the moneys available and to release them as required by the administrative body. It is expected that without delay the board will be appointed and the Government Departments concerned, the employers' associations, the trades-unions in the cotton industry, various institutions, certain chambers of commerce and other bodies are to be asked to nominate members. A central office in England is to be opened and a general director appointed who will be expected to conduct the business on business lines. The main expenditure, however, will be abroad. Research and education will be fostered and assisted, but the matter of most pressing importance, and which will absorb most of the money available, is the strengthening of the staffs of the agricultural departments in colonies and protectorates where cotton is a possible crop by adding to the staffs trained men who will give their whole or their main attention to cotton. The efforts of the agricultural departments in several of the colonies and protectorates to introduce improved seed and to maintain purity of strains will be supported and extended. The means of transport will be systematically studied, assistance will be given in providing its minor forms and such measures as are thought advisable will be taken to promote the extension of railways and the improvement of waterways. Commercial assistance has already been provided by the British Cotton Growing Association in many places, both in the way of guaranteeing prices for the season and in securing that proper prices are paid in proportion to quality. This will be extended wherever possible by means of the funds at the disposal of the new organization. It is agreed that the primary work of the new organization will be to develop the growing of cotton by natives and settlers in the colonies and protectorates for their own profit. It is not contemplated that the new organization will, at any rate in its first years, take any part in growing cotton on the plantation system, and any profits incidentally arising from any part of the work of the organization will be utilized for extending its sphere of usefulness. The new organization will, however, do all in its power to facilitate the growing of cotton by British capitalists in such places as may be suitable for this form of progress.

F. W. TATTERSALL.

[What prices have been guaranteed to the natives of British possessions is a question which all cotton growers would like to know.—Editor MANUFACTURERS RECORD.]

Cotton Hit by Federal Reserve Board

By W. B. THOMPSON, New Orleans.

Once more the Cotton South is called upon to arise and fight its battle against disaster.

The crop now growing has been brought to its present stage of development under the most unfavorable and difficult conditions and at a cost much greater than that of any crop ever produced. Yet October cotton sold today at 30 cents, and predictions are freely made that when the movement of the new crop becomes liberal the price will be 25 cents per pound or less. Cotton on the spot is quoted as some 8½ cents per pound above the price of October contracts.

It is wholly unnecessary to say to those who are familiar with the problem of cotton production that the prices now prevailing for October cotton would be ruinous, not only to the cotton producer, but to the cotton-producing industry. It is, therefore, imperative that the producers and their allies, the merchants and bankers, shall unite to prevent the personal and general disaster impending. With proper co-operation on the part of the interests in question, there is no doubt but that the cotton farmers can bring confusion upon the heads of their enemies and prosperity upon their own.

No Friends.

In these drab days cotton has no friends and the cotton farmer is regarded as the legitimate prey of selfish business and political manipulators. The commodity upon which the world depends for clothing has become the despised puppet of speculative and political propaganda, while the men, women and children who wear out their narrow lives in the production of the commodity are being crucified for considerations of greed and selfishness and political exigency. Heretofore the cotton producer in his fights to secure a decent living out of his product has had to contend only with his natural adversaries—the spinners and the pirates of speculation. Twice within the past two years he has met these opponents face to face, and twice has he whipped them. In the fall of 1918 by his courage he repulsed the spinners and bear speculators in their efforts to stampee him, and again in the spring of 1919 he routed these adversaries through his determined stand for holding and acreage reduction.

But in the present emergency the cotton producer is called upon to defend himself against not only these natural antagonists, but against these antagonists aided, abetted and encouraged by the most powerful agency of the United States Government.

Federal Reserve Board's Activities.

I refer to the Federal Reserve Board. In all fairness it must be agreed that in its participation in the solution of the deflation and readjustment problem this board is involved in a most complex, difficult and stupendous task. It was entirely proper that the Federal Reserve Board should assume the lead in the movement to restrict credits in so far as speculative ventures, non-essential industries and promotion schemes are concerned, but in so doing it was not necessary and it was most unwise to strike at the foundation of all industry and all productive enterprise by shooting the virus of fear into the financial and economic body of the nation.

The announced purpose of the board was to curtail speculation in commodities and to reduce the cost of living. The result of its efforts so far has been to paralyze constructive speculation while destructive speculation runs rampant and unopposed. They have chloroformed the bulls and galvanized the bears. Although by throttling production some declines in certain lines of living cost have been brought about, yet by the same act the predicate has been laid for a famine in necessary supplies, for the highest prices ever known and for widespread industrial disturbance. The board is proposing to restore an intoxicated nation to normal by weakening the action of its heart.

Panic Propaganda.

However, it is not to the general policy of the Federal Reserve Board, no matter how injurious that policy may be, that I desire to direct special attention. I want to point out as strikingly as I may a definite, direct and deliberate blow aimed by the said board at the price of raw cotton and against the welfare of the cotton producers.

In the newspapers of Friday, July 30, 1920, appeared what was stated to be a reassuring report of the general situation made public by the Federal Reserve Board. It was reassuring to the spinners and the bear speculators in cotton, but not so to the cotton producers. In the said article the following statements appeared:

"Improvement in the cotton crop prospects during the month were declared by the board to have reduced any anxiety that had been felt in the cotton goods trade concerning a prospective scarcity. * * *

"A reduction in activity in cotton goods was noted during the month, many New England mills reporting supplies of raw cotton sufficient to last until next year. * * *

Under the existing conditions, when the cotton market was almost in a state of panic, these partisan statements might have been expected from the dope works of a bear raider, or from the propaganda department of the united spinning industry, but certainly not from the Federal Reserve Board of the United States. In the first place, both of these statements are misleading, if not absolutely incorrect. It is true that the crop has shown material improvement over the desperately low conditions of two months ago, but the fact remains that this same crop had the worst start on record; that it is late; that it has yet to pass through the most critical period of its life, and that the boll-weevil is more or less plentiful throughout practically the entire cotton belt awaiting the August period wherein it is always most destructive. The spinning industry and the contract short would like to believe that cause for anxiety had been removed, but I doubt seriously that they can feel secure until the critical period has been passed and the forecast crop made and picked, or unless they shall be able in the meantime to stampee the producer into panic and ruin. If the Reserve Board sees fit to enter into a discussion of the market situation, it would seem only fair that the producers' side of the argument should be given a hearing in his present struggle for economic existence.

The board in the said statement is quoted as saying that many New England mills have reported supplies of raw cotton sufficient to last until next year. The obvious purpose and the inevitable effect of such a statement is to create the impression, without actually making the assertion, that the mills generally were already supplied with enough raw material to run them until next year. This implication is not only exceedingly injurious to the cotton producer in the present emergency, but it is, if the statements of another department of the Federal Government are to be believed, absolutely incorrect.

The Federal Census Bureau, in its report to the end of June, published July 14, states that the total amount of cotton on hand in all consuming establishments was in round figures 1,555,000 bales. The same report shows that consumption for the month of June was in round figures 555,500 bales, and that the average consumption for 11 months was just about the said figures for June. With a consumption of 500,000 bales per month this supply would be exhausted by the end of September!

Why Pick on the Cotton Farmer?

But regardless of the correctness or incorrectness of the said statements and implications, the question arises as to why the Reserve Board sees fit to publish these ex parte statements and injurious surmises at all. I can well understand that the board from both patriotic and political motives desires to reduce the high cost of clothing and cotton goods, but why put the burden upon the producer of raw cotton? It is a matter of common knowledge that the spinners' profits during the past two years have been prodigious, whereas it is a matter of serious doubt as to whether the cotton farmer has during the same period made more than the cost of production. Why then should this great public board join the cohorts of wealth-swollen manufacturers and greed-obsessed bear speculators in an insult upon the cotton farmer and his product? Of course, the spinners will say that they are not in the least uneasy about any scarcity of supply because the crop will be big, and besides they have already enough cotton to run them into the next year. Of course, the bear speculator will say that the supply of cotton is and will continue to be greatly in

excess of demand, and that prices are going to pot. They want to stampede the producer into selling at a sacrifice. We are familiar with this kind of propaganda. But why should the Federal Reserve Board—the greatest power in the United States today—join with these propagandists and circulate this propaganda with every implication of concurrence, knowing, as it must know, that its pronouncements will be used with telling effect against the cotton producer in his fight for a decent living and a fair profit? There are better and wiser ways of reducing the cost of cotton goods to the using public than by sand-bagging the cotton producer. It would seem that the Reserve Board could, with higher purpose and sounder judgment, address its effort toward curbing the excessive profits of the dry goods manufacturers and merchants instead of supporting a campaign which means ruin to the cotton-producing industry.

It is quite true that the high cost of cotton goods might be reduced without any objection from the manufacturer and without affecting his margin of profit, by forcing the farmer through financial restrictions and the propaganda of despair into selling his crop at a sacrifice, but such consummation, although it might win temporary applause, would inevitably react in terms of disaster upon the manufacturing industry, upon all the users of cotton goods and upon the country at large. If the cotton producers are forced to sell the coming crop at the cost or less than the cost of production, they will not only be unwilling to plant another crop sufficient for the world's needs, but they will be unable to do so.

The True Situation.

But, thank God, although our adversaries are strong, the situation is by no means hopeless. On the contrary, it is not only possible, but it is not even difficult, for the cotton producer and his allies to turn the apparent rout into victory.

Let us, for the moment, close our ears to the Reserve Board's song of sorrow and the accompanying chorus of profit-seeking calamity howlers. Let us, with vision clear and unafraid, take stock of the situation, find the remedy and apply it. * * *

The Low-Grade Incubus.

During the past three years low-grade cotton has been a grievous burden upon the cotton industry. During this period the supply of these damaged grades has been abnormally large and the demand therefor abnormally small. The over-supply condition was caused by bad weather after the cotton had opened, and the lack of demand has been due to the fact that the normal low-grade markets have been closed and to the additional fact that during the war the United States Government in formulating its contracts rankly discriminated against the lower grades. As the result of these conditions the grades below middling have declined to preposterous discounts. Low middling is quoted at 10¼ cents per pound less than middling, the next grade above, and good ordinary at 18½ cents per pound less than middling, and even at these discounts all the grades in question have been and are still practically unsalable.

It costs more to produce these low grades than the higher grades. Even when they can be sold at all they are sold at an enormous loss. Worse than that, the presence of an accumulation of unmerchantable stock in the market is a depressing factor in so far as the merchantable grades are concerned. The conclusion is that the cotton farmer simply cannot afford to produce and market the lower grades. These grades not only represent an unbearable difference between the production cost and the sale price, but they constitute a weapon with which the producer's antagonists may assault him. Low-grade cotton under present conditions is not an asset, but an infectious liability.

Therefore, the plan proposed is simply this:

Do Not Harvest Any Grades Lower Than Middling.

But it will be objected that the weather makes the grades and that the farmer cannot control the weather. This is true, but the farmer can regulate the grades he picks and puts upon the market.

The Plan.

As soon as cotton opens pick it as rapidly and as carefully as possible; have it ginned gradually; when ginned, store it in a warehouse if the same is available; if warehouse is not available, take the cotton home, build a shelter for it, put it on skids and from time to time turn the bale over in order that all sides may

be exposed to the air; sell when demand calls for it at satisfactory prices. Now:

"Do not pick any rain or weather-damaged cotton. When the weather gets bad, turn the cattle into the fields. Do not let the damaged cotton stay to be picked later and sold at ruinous discounts, and in the meantime to be used by your adversaries in beating down the price of your good grades. Destroy the low-grade cotton and through such destruction fatten your cattle and your own pocketbook."

If this plan is carried out—and it will be carried out by every sensible farmer who considers the same—the coming crop will be reduced by several million bales in quantity, will be increased by many million dollars in value, and at the same time the producer will save the loss incurred in the production of an unmerchantable commodity and will rout his would-be despoilers horse, foot and dragoon.

The Need of More Small-Grain Acreage in the South.

By C. A. WHITTLE, Southern Soil Improvement Committee.

If there were no other reason, the railroad difficulties point to the wisdom of the South taking care to grow plenty of small grain. At best, the inadequate railroads will have sore trouble in getting the grain out of the West to the greater population centers. But with all the uncertainty of railroad labor added, the necessity for the South growing the grain it needs would seem to be urgent.

The grain crop which the South harvested in June and July was an encouraging one in point of yield and acre returns to the farmer. The acreage, however, in some of the Southern States was not quite as large as for the few years immediately preceding when the war demands had spurred up the sowing. Not only has there been a lifting of the war obligation, but there has been the very attractive position in which cotton stood as a claimant for acreage. The result has been that there was a slackening in effort to grow wheat, oats and barley in the South. It may be no easy matter to rouse the Southern farmer to a sense of obligation to grow bread stuff, so many have been the appeals to his sense of duty; but there is an active demand for all the grain the Southern farmer grows, whether it is a local demand or a demand from Europe, whose grain-growing nations remain paralyzed with war, rumors of war and bolshevistic confiscation.

The main crops of the South are heavily involved with labor. They are cultivated crops. Wheat, oats, rye and barley are not cultivated crops and are therefore inviting as a means of keeping acres at work with a comparative low labor requirement—a matter of no small consideration in view of the farm-labor shortage in the South.

It is true that fall grain sowing comes at cotton-picking time, but no serious interference with cotton is involved in sowing the few acres of small grain. As a rule, small grain can be sown after corn or cotton, as late as November, in the cotton belt. There is very little preparation of the soil required. The soil may be disked and sown without the expense of breaking the land.

It is an excellent custom in the South to follow the small-grain crop with cowpeas that can be matured before frost, either for hay or for turning under as a green-manure crop.

Too little attention is, however, given in the South to the advantages that modern agriculture has demonstrated will increase yields profitably. Good pedigreed seed are not valued sufficiently. The full advantages of commercial fertilizers are not made use of, including not only the application at seeding time, but as a top-dressing during the growing period.

The Southern farmer should undertake to grow the largest yields possible per acre consistent with profit. In so doing, he would make it possible for his expensive labor to grow a greater number of bushels of grain than he would grow with a poor crop on the same acreage with the same amount of labor. His labor cost per bushel would thereby be decreased.

The American Chamber of Commerce in London states that British timber importers have decided to appoint a purchasing combine for the whole trade, and with this object in view a special committee has been formed to arrange the details.

World's Greatest Grain Handling Center

CHICAGO'S BOARD OF TRADE RESUMES OPERATIONS INTERRUPTED IN 1917—PART
PLAYED BY THE BOARD IN DISTRIBUTION OF AGRICULTURAL PRODUCTS—CHICAGO
FINANCIERS APPREHEND NO GREAT STRAIN IN MOVEMENT OF CROPS.

By EDWARD JEROME DIES.

Chicago, Ill., August 6.

The world's greatest marketing machinery, the Chicago Board of Trade, is again operating on a pre-war basis.

The resumption in July of trading in wheat for future delivery, after three uncertain years of Government control over the wheat business, is of vast economic importance to the world, according to agricultural and industrial experts.

For the first time since August 25, 1917, when the Government assumed control on the basis of a fixed price, operations are permitted beyond mere limited quantities of a hand-to-mouth character.

"The law of supply and demand has re-entered the trading pit, where buyers and sellers in the open market, absolutely responsive to actual conditions affecting values, again operate that machinery which Herbert Hoover told Congress is the most economical in the world," said Leslie Gates, president of the Board of Trade.

When the Government took control a guaranteed price of \$2.18 a bushel to the farmer was established. Later this price was increased to \$2.26. During the period of a fixed price wheat for immediate delivery sold in Chicago as high as \$3.95. But the farmer in most cases received only the guaranteed price. There was speculation of a character that does not obtain in the open futures market. Also with no facilities for "hedging" his purchase and thus obtaining insurance against loss in event of a violent price turn, the wheat buyer had to take a greater margin.

Many farmers who talked long and loud for a Government guaranteed price for their wheat sickened of the arrangement. Their wheat, in many cases, brought a much higher price than they received.

The country's annual output is approximately a billion bushels of wheat, three billion bushels of corn and a billion and a half bushels of oats, besides smaller quantities of rye, barley and other grains. This huge yield must be evenly distributed. The task must be accomplished within a few months, and by the nation's grain exchanges. Without the protection which comes through hedging, or trading in the futures market, the farmer, the elevator man and the manufacturer are in danger of sustaining grave losses. This has been proved in hundreds of cases where country elevators collapsed when prices suddenly went down and they had failed to protect in the futures market. They were the biggest gamblers of the grain world. Had prices gone up, their profits would have been enormous. They gambled with the farmers' wheat, the farmers' money, and lost.

"The word 'hedging' is the most misinterpreted word in the commercial world today when relating to the grain market," said Prof. James E. Boyle of Cornell University, who has just completed an extensive study of agricultural conditions. Professor Boyle was formerly of the Bureau of Markets of the Department of Agriculture, and is now professor of agricultural economics at Cornell. "The same farmer who loads up with various kinds of insurance will shy at having his grain crop hedged," Professor Boyle continued. Yet it is insurance pure and simple. But, unfortunately, the word has been mistreated by politicians and others seeking personal gains until it is looked upon with misgiving.

"There are two ways to hedge. One is by trading in the futures market. The other is by taking a larger profit. To illustrate, during Government control the country elevator took about 8 cents a bushel as cost and profit in handling wheat. Ordinarily these elevators take about 4 cents. But without hedging and because of fluctuations, it was necessary to widen the margin of profit in order to protect against loss.

"The term 'hedge' should be changed to 'grain marketing insurance,' for the latter truly expresses the meaning. The real value to the farmer, as well as to every other interest down to the consumer, of hedging in the wheat futures market became more and more apparent during Government control. Hedging stabilizes

prices, makes possible a world market and permits distribution of crops at minimum cost.

"There is rapid growth of futures trading in farm products other than grain. For instance, in the big orchards of Washington and Oregon the apple crops are sold before the apples are on the trees. This is also true in parts of Illinois and Indiana. Canning crops, including tomatoes and cucumbers, are sold in advance for future delivery. The great co-operative farmers' organizations of California sell their raisins, walnuts, almonds, prunes and apricots on these so-called forward contracts.

"The reason for the growth lies in the fact that trading in futures stabilizes business and avoids risks and uncertainties. If we know the cost, we can work on a very small and stabilized profit.

"The advantage which trading in wheat futures has over trading in other farm products is in the strict rules of organized grain exchanges which provide for enforcement of all contracts."

The growth of Chicago as a grain-marketing pivot spans 81 years.

One Indian summer day, back in 1839, the little brig Osceola poked her nose out of the early morning haze that curtained Lake Michigan and a few minutes later made fast to a small dock on the Chicago River. A group of men busying themselves on the dock paused long enough to throw their hats in the air and shout a welcome to "the little tub from Buffalo."

Throughout the day a stream of wheat was spouted from a warehouse hardby to the deck of the brig and dumped into the hold. The morning of the second day the little vessel started eastward with the first shipment of grain that ever left Chicago—1678 bushels of wheat which had been purchased from the farmers' wagons by the firm of Newberry & Dole.

In the musty records of the Chicago Board of Trade a copy of the bill of lading for that first shipment has been found. It reads:

"Chicago, October 8, 1839. Shipped in good order and well conditioned by Newberry & Dole, as agents and forwarders, for account and risk of whom it may concern, on board the brig called Osceola, whereof Francis Billings is master, now lying in the port of Chicago, and bound for Black Rock, N. Y., the following articles, being marked and numbered in the margin, and to be delivered in like good order at the port of Black Rock (the dangers of navigation being excepted) unto the consignee named in the margin, or to the assigns. The freight and charges to be paid noted below.

"In witness whereof, the master of said vessel hath affirmed two bills of lading, of this tenor and date, one of which being accomplished, the other to stand void." Then follow the figures showing the amount of wheat and the signature of F. P. Billings.

The records show that it was the custom then for the purchaser, instead of paying cash on the delivery of grain, to give a receipt like the following: "Received in store from John Brown, 30 bushels and 20 pounds wheat at 44 cents. For account of H. O. Stone. Newberry & Dole." Brown would use the certificate to purchase goods and the merchant, after receiving a number of such receipts, would present them to the grain firm, which would give their note for the amount, payable at some future time.

It was nine years later, in 1848—the year Chicago received its first telegraph message and the year the Illinois and Michigan Canal opened up a great artery of trade—that the Chicago Board of Trade was organized by a handful of merchants.

The "Grand Old Man of the Grain World," Israel Parsons Rumsey, bought a membership in the board for a five-dollar bill. Today that membership is worth more than \$10,000. Mr. Rumsey is the oldest living member of the board, and is credited with having been a leading factor in the 61-year battle which has eliminated the bucketshop and brought the board up to its present high standard of efficiency.

"The evolution of the Chicago Board of Trade has been slow, but remarkably effective," Mr. Rumsey told the writer.

"The hectic days of the bucketshop, that lawless agency that wrapped a mantle of false tradition about the nation's grain exchanges, are now but a dim memory. But the tradition has been kept alive. Even today you will hear mutterings from ambitious politicians and persons misinformed, mutterings that mislead the public as to the true functions of the world's great open grain market.

"The Chicago Board of Trade is as democratic as any organization in existence. It must be remembered that the association has nothing to buy, nothing to sell. It simply makes rules which must be rigorously observed by its members.

"A majority of these members are small dealers, a very large majority. The initiative and referendum has been in operation a long time. These small dealers, therefore, are enabled to govern.

"Down through the years there has been a white hot fight against the bucketshop operator and his like. There has likewise been an evolution which has completely eliminated everything smacking of unfair practice.

"Corners and attempted corners of years gone by are still fresh in some minds. Yet so rigid are the rules which today govern trading that it would be as easy to corner the stars in the sky as the wheat market.

"The reasons are obvious. Not only would an attempt to effect a corner result in expulsion from the board, but it has been designated by the United States Supreme Court as a criminal offense.

"In years gone by, under the board rules, one grade of wheat was deliverable on future contracts. Then it was possible to corner one grade. But today there are 21 grades deliverable on contract. At one time only wheat in store in terminal elevators was deliverable on contract. Then it was possible to corner all the wheat in store. Now grain on track in Chicago's switching district is deliverable on contract during the last three days of the month. This makes possible the easy, quick shipping in of great quantities of grain to put a sharp end to an attempted corner.

"There are many other rules that likewise make it utterly impossible to develop a corner. In the old days those who had sold short had to buy from the man attempting the corner at a price, and a fictitious price, too, which he would name. Such a policy has long been outlawed by the board. Under prevailing rules, settlement would be at a price fixed by a committee and determined largely on the basis of prices obtaining in other markets.

"There is a lot of glamour to the sensational attempts which once were made to corner grain. Yet 90 per cent of these attempts failed completely and resulted in financial ruin for the men back of them. The days of corners are dead and buried in the past. They can never return."

In addition to the great future market of the Chicago Board of Trade, more than 400,000,000 bushels of grain are bought and sold each year in its cash department. Cash, or spot grain, is grain actually on the tracks and in elevators ready for immediate delivery.

In a single month as many as 30,000 cars of grain have been received and handled by the Illinois State Grain and Inspection Department, which grades and tests the grain before samples are placed on the Board of Trade.

Recent reports that a financial crisis might result from the movement of this year's huge crop have been set at rest by statements of leading bankers.

"Financing the crop movement during the next few months will not prove as great a strain on the Midwest money market as the country generally has been led to believe," said George M. Reynolds, president of the Continental and Commercial National Bank in Chicago.

"Railroads are in a bad state of congestion. They very likely will remain in this state throughout the crop-movement period. Therefore, it is not likely that any particularly heavy movement will take place at any one time and the credit requirements will be spread over the entire period.

"While shrinkage of Wall Street stock-market loans to the extent of several hundred million dollars in the last few months may help the situation, financing the movement to market in the Central West is done from Chicago as a center. Comparatively little local money is devoted to New York stock-market loans.

After the crops have reached Chicago elevators and the movement starts east, then there is a larger degree of New York financing. But this takes place after the original crop movement from farm to market."

Optimism of a like character was expressed by E. D. Hulbert, president of the North American group of banks, and Frederick T. Haskell, vice-president of the Illinois Trust and Savings Bank.

Southern Railway Co. Will Have Elaborate Exhibit at Sixth National Exposition of Chemical Industries, New York.

One of the most elaborate exhibits at the Sixth National Exposition of Chemical Industries, in Grand Central Palace, New York city, September 20 to 25, inclusive, will be that of the Southern Railway Co. The exhibit has been placed in charge of the A. D. Little Company, Boston, and will consist of maps and panels showing what wonderful opportunities the South offers to manufacturers in developed and undeveloped resources.

Traversing as it does a most important coal belt, and with undeveloped water-power along its lines that is practically unlimited, the Southern Railway is in a most advantageous position. It is the intention to show by the display the great natural wealth of the South. Moving pictures will also be part of the exhibition.

Outside of the coal and water-power resources, the Southern touches mineral resources in great variety. In fact, the fields are so vast that they have not been worked to any large extent as yet. Thus far the principal resources valuable to the chemical industry and its allied interests are petroleum, rosin, turpentine, phosphates, manganese, gypsum, gold, silver, lead, mica, lumber and valuable deposits of clay material, very much in demand for making glassware used by chemists. The A. D. Little Company will have two of its best-known engineers at the Southern Railway booth to explain the exhibits.

SUGAR-MAKING IN THE EVERGLADES.

A Pennsylvania Refining Company Growing Cane and Will Begin Manufacturing About a Year Hence.

The Pennsylvania Sugar Co., which last year purchased a large tract of land in the Everglades of Florida and immediately began developments for planting sugar-cane and establishing sugar mills and refineries, has added to its already very extensive estate by buying 56,000 acres more from the Tatum Land Co. of Miami, Fla., for nearly \$1,000,000. The price is said to have been, according to a local report, \$15 per acre for the bulk of the addition, while the remainder was \$22 per acre. The sugar company now owns 120,000 acres of land in the Everglades, following the Miami Canal from Lake Okeechobee, in the heart of the 'Glades, to a point southward of the junction of the Miami and New River canals.

A recently published statement concerning the developments in progress, after noting that the Pennsylvania Sugar Co. are large sugar refiners in Philadelphia with a huge output annually, says that by the autumn of 1921 it is expected to have at least 2000 acres of land under cultivation, and that a year from this coming winter the manufacture of sugar will begin there. At present the cultivation of the land upon a large scale has started, and seed cane is being planted.

Van Alen Harris is reported in the Miami Herald as saying in reply to questions as to whether cane could be grown in the Everglades: "We are growing it." He further said that the cane grows very quickly and is vigorous.

The report further states that Mr. Harris, who is the resident manager for the company, spends most of his time at the plantation, and that he is an experienced cultivator of sugar-cane. He was the constructing civil engineer for the Guanica Central Sugar Co. of Guanica, Porto Rico, in 1901; superintendent of El Ejemplo sugar factor at Humacao, Porto Rico; manager of the Juncos Central Company, Juncos, Porto Rico; constructing engineer of Fortuna Sugar Co. at Ponce, Porto Rico; general manager of the Central Romana Sugar Co. at La Roma, Santa Domingo, and vice-president and general manager of the Haytian-American Sugar Co. of Port-au-Prince, Hayti.

The \$10,000,000 London Commercial Enterprise of Mr. Irving T. Bush of New York

By THOMAS H. UZZELL, 16 Wall Street, New York.

Some twenty years ago London decided to make a straight road from Holborn to the Strand. It was the largest "improvement" made in the modern history of London, and it was not made without the obliteration of a large acreage of eighteenth-century London in which Dr. Johnson lived. Clare Market went and Holywell street, and when Holywell street fell, early one Sunday morning, there was a great migration of rats—thin rats, one would imagine, for the street was famous for second-hand bookshops—across the Strand and down the sloping streets to the river. When the improvement was completed London found itself in possession of the new street which after much debate was christened Kingsway, and there emerged also out of the scheme the famous Aldwych Island site of three acres, with its great frontage to the Strand.

The future of this site has always been a subject of speculation with Londoners. It was perhaps the most splendid and illustrious vacant site in Europe. What private firm in the whole world would feel itself big enough to step into this immense pair of shoes and wear them? After a considerable number of years the problem is solved, and London knows that Mr. Irving T. Bush of New York will erect upon it a building which is to cost some two million pounds. London is interested in the new building and in the purpose which it is to serve, and it is an event of some importance in the common history of the English-speaking world that the greatest site in England is going to serve the purposes of a distinctively American idea. It is a considerable advance in what we may call the American invasion.

Aldwych is a great site now, and it is even going to be greater. No one can go about London with his eyes open and his memory at work without seeing that a great shifting and a great drift is taking place. Some 20 or 30 years ago London was divided clearly and sharply into the two great kingdoms of wholesale and retail trade. The division occurred roughly somewhere about Temple Bar, perhaps farther east at St. Paul's Cathedral. On the east of this boundary and within what is known as "the city" was the territory of wholesale trade, and with wholesale trade there were grouped also all the great and solemn temples of banking, shipping and insurance. On the west of the same boundary the shopping began, and reached its arterial center in Regent street and Oxford street.

The modern movement takes the form of a spilling over of finance and insurance, and so on into the West End. All around Piccadilly Circus and Trafalgar Square a new mercantile quarter can be seen growing up. Cockspur street, which runs from Trafalgar Square to Pall Mall, and Waterloo Place are now largely given up to the offices of the great passenger lines which would at one time have been found in "the city." And the shopping area, thus dispossessed of some of its best territory, is going farther west, and many believe that its center will some day be found out at Kensington. The rise of great shops in Kensington, High street, which was once the morning parade-ground of colonels' pensionary widows and their little dogs, is one of the most striking changes which have occurred in modern London.

This shifting of the city men to the west cannot occur without Aldwych and the Aldwych Island site becoming the geographical and the strategic center of London. The day will come when England will watch with great interest the progress of the Bush Terminal Company and of the new idea which it is to introduce into English commerce. But at the moment speculation chiefly turns on the kind of building which the company will erect. Mr. Irving T. Bush is incurring a great responsibility to London. He becomes a kind of trustee for all that has been and will be in London. It was somewhere in the neighborhood of this Aldwych Island site that Dr. Johnson, shouldering his way through the crowds and looking up at the pearl-gray spires of the Wren churches, told Boswell that a man who was tired of London was tired of life.

One of these London churches stands so near to the site that it is properly part of it, and must be held steadily in mind by any

architect who has an eye to the general effect he will produce. It is the church of St. Mary-le-Strand, which dates from 1717. Mr. Bush is quite conscious of the existence of this somewhat precious fragment of the past, and he is very explicit about his determination to erect a building which will harmonize with the rest of London. The new sales building at Aldwych is not intended to promote the sale of American goods in England. Its prototype in West 42d street, New York, is for the sale of American goods to American buyers, and the building at Aldwych transfers the same idea into the region of English trade. Accordingly, Mr. Bush will not build a "skyscraper." "We do not intend," he says, "to be aggressively American." Skyscrapers are much talked of in London at the present time. They are even recommended as a cure of the pressing housing difficulty, but the new building of the Bush company will be in accordance with English ideas, and the plans show it to be not more than seven stories high. The co-operative salesmanship which will go on inside is new to English ways, and it remains to be seen whether the strong individualism of English traders will take to it, but to the average Londoner who passes the site the house of the Bush company will be merely an addition to the classical buildings of London for which he will be grateful until he gets used to it and thinks no more about it.

All the same, Mr. Bush has noticed many of the old-fashioned ways of the Englishman, and he hopes to introduce innovations which will be welcomed and will spread. In the new building in Aldwych a number of offices will be available for firms which have no connection with the Bush company and its method of combined salesmanship, and these will have features with which English commerce is not yet acquainted. Mr. Bush hopes that England will take to the American office as it is already taking to the American hotel. He thinks that the English lift or elevator is still in its infancy. In many, and indeed in most, of the great commercial buildings of London the lift is found in some obscure quarter of the building. Very frequently it will be found that a large building with many tenants has only one lift, which is apt to remain mysteriously aloft and out of sight while passengers accumulate below and wait for it by faith.

In the new building Mr. Bush will give London almost its first exhibition of the work of the "lift-starter," who keeps in constant telephonic communication with a battery of lifts and hurries them from floor to floor of their journey, maintaining an exact and frequent service to which London is still a stranger. In London, again, it is usual for office accommodation to deteriorate considerably on the upper stories. Roofs become lower and rooms smaller as the floor becomes higher, but in the new building at Aldwych it will be found that highest offices enjoy all the advantages of those on the ground floor, with the addition of better air and a better light. There will be central heating. There is no doubt that English people will readily see the advantage of these improvements and take to them as they have taken to many American ideas which were found in hotels like the Carlton and the Ritz.

Will the English manufacturer take kindly to the combined sales service which the Bush Terminal Company has already made familiar to New York? Mr. Bush thinks he will. "We had," he says, "to overcome much prejudice in America, but if a principle is sound it will be recognized in time, and I would rather spend energy in pushing a sound principle than in backing an unsound one, even though it may be in general practice." The first instinct of the small manufacturer, for whose benefit a combined sales service is primarily organized, is to fear that competition will be altogether too keen a wind when his goods are grouped beneath one ceiling with those of all or many of his rivals and entrusted to a salesman who is the servant not of himself alone but of all the manufacturers represented in the room. It may thus easily happen that some manufacturers, while they see the advantage of taking space in a building which will be visited by so many mer-

chants, may yet prefer to display their products in a separate room and to entrust it to their own salesman.

This arrangement will be possible to those who desire to enter into it, but it is a departure from the bold principle on which the sales building at Aldwych will work. This is the principle of co-operative selling. Co-operation in producing has become, even in conservative England, a fairly familiar idea. It has made much progress in agriculture, for example, and farmers save expenditure considerably by the joint ownership of machinery. But hitherto English manufacturers have not regarded the actual selling of their products as a process in which co-operation could be carried very far. Even at industrial fairs and exhibitions, which have become common in England, it has been a matter of course that each exhibitor should fly his own flag, and if there have been 40 exhibitors, for example, of crockery, there have been 40 crockery salesmen doing the same thing 40 times over at 40 times the expense.

Competition in trade cannot be dodged, and may as well be met soon as late. The sales building in Aldwych is intended primarily for the young manufacturer who is making an article which he is prepared to back against the world, but who is not yet in a position to advertise extensively or to employ commercial travelers to push his goods. It will give him a place in the sun. It will open up an English market to English manufacturers. American goods will take the secondary place in the London building which English goods take in the establishment in New York.

The building at Aldwych is intended for goods which require to be seen before they are bought. Merchandise like coal and wheat will therefore be excluded, and a large number of departments will be formed for such commodities as jewelry, crockery, leather goods, and, indeed, anything and everything which are bought on the strength of samples. The manufacturer who seeks admission must come naturally into one or other of these departments, and he will then obtain the advantage of what Mr. Bush calls "co-operative salesmanship which reduces costs and simplifies work."

But the building will serve other purposes; it will provide a king of "buyers' club," and everything will be done to make it an attractive social and educational resort for all who are engaged in trade. The site at Aldwych has been used during the war for many forms of temporary war work. It has been a great settlement of huts, and more especially of the huts of the American, Australian and New Zealand Y. M. C. A's. These huts are now being removed, and Mr. Bush hopes that a beginning will be made on the new commercial palace very soon, and he expects to see it completed in about 18 months or two years.

American methods in business have made much progress in England of late years. The English hotel service wears strong marks of American influence. In London the prevailing kind of shop is now the American store, and London is always hearing of some fresh amalgamation which is invariably followed by a further development of American storekeeping methods. English advertising, again, though it is still far behind that of America in boldness and enterprise, begins to show courage and style, and we recently heard of the death of an English manufacturer whose business secret was to "make a good article and make it known," a formula which might have been invented in America. This Americanization of the old country has been going on quietly for some years; the opening of the sales building on the Aldwych site will be a long forward step in the process.

Perfects Motor Transmission System.

Sistersville, W. Va., August 5—[Special.]—Benjamin F. Webb, vice-president of the Sistersville Acetylene Welding Co., and Andrew J. Karl, also of Sistersville, having perfected a transmission system for motors which is said to be especially well adapted to automobiles, it is indicated that a corporation to be capitalized at \$2,500,000 to manufacture a transmission and gear system will be organized. Charleston people are behind the new corporation to a large extent, it is stated.

It is claimed for the new invention that it will enable the gearing automatically to pick up a load on the driven shaft and that it will tend to prevent slipping of the gearing by virtue of the wedge action set up. The further claim is made that engineers and automobile experts have pronounced the invention as marking an important step forward in the operation of automobiles.

British Dye Industry—Prohibition of Imports to Safeguard Britain's Future.

Manchester, England, July 21—[Special.]—During the last few days there has been more discussion in local trade circles in connection with the future of the British dye industry. Yesterday in the House of Commons, in reply to a question, Sir Robert Horne, the president of the Board of Trade, said that the experiences of the war made it apparent that the existence of a strong synthetic dye-making industry is a military necessity and essential to the defense and security of the United Kingdom. All the various alternative methods of fostering the industry have been considered, and the Government is of opinion that assistance can be most effectively given by the prohibition of the importation of synthetic dyestuffs except under license. An undertaking has already been given to the industry that this course will be adopted, and accordingly proposals to that effect will be embodied in a bill relating to key industries which will be introduced into Parliament and proceeded with as soon as possible.

About 12 months ago there was formed in this country the Color Users' Association, and the first annual meeting of members was held in Manchester yesterday. Mr. Vernon Clay, the chairman of the Reconstruction Committee, said that the dye-making industry must be established on a firm foundation in this country for reasons of national security as well as of commerce and industry. No other country should have the power to control our interests to such an extent as to endanger them. There were different ways of establishing the industry. We might endeavor to protect it by tariffs, but tariffs were practically impossible because of the fluctuating exchange. He was authorized to say that the Government intended to bring in a licensing and prohibition bill. This would probably mean that the association would have to alter its constitution. They would have to become a company, and as they probably would not wish to become a profit-making body of shareholders, the view of the Reconstruction Committee was that they should be a company limited by guarantee. Mr. Christopher Rawson, chairman of the Technical Advisory Committee, described the work done in allocating and distributing the dyes imported from Germany under the reparations clauses of the Peace Treaty. Under these clauses the Allies had the option of taking 50 per cent of the stock of German dyes existing in August, 1919. Great Britain was entitled to receive 30 per cent of that 50 per cent, or 15 per cent of the total stocks. The committee was informed last December that the German stocks amounted to 22,000 tons. Of that quantity, Great Britain should have received 3300 tons. On several occasions the committee had endeavored to obtain from the British Board of Trade information regarding the amount allocated to this country, but without effect. Up to the present time the consignments did not account for more than 1500 tons, and it was doubtful if all that had actually been received. The committee had purchased 140 tons of free dyestuffs in Germany at a value of about £192,000, and had secured options for about 700 tons at a value of about £1,000,000.

Plan to Develop American Trade Abroad.

The administrative committee of the American Bankers' Association has adopted a resolution saying that the foreign trade financing plan formulated by John McHugh, chairman of the commerce and marine committee of the association, and endorsed by the executive council at the spring meeting at Pinehurst, N. C., April 27, is developing in a manner making possible co-operation in it on a wide and effective scale by banks, exporters and importers, manufacturers and producers generally. The resolution also urges that Mr. McHugh accept the chairmanship of the board of directors of the foreign trade financing corporation proposed by the plan, and which is to be organized on or about January 1 next. The capitalization may be \$100,000,000. The purpose is to maintain and develop foreign markets for American products. Mr. McHugh, who is vice-president of the Mechanics and Metals National Bank of New York, and also president of the Discount Corporation there, sailed for Europe July 31, and the announcement of the personnel of the official staff and board of directors of the corporation will not be made until after his return.

Big Irrigation Projects for Louisiana Lands

WOULD DRAIN HUGE TRACTS BY GRAVITY SYSTEM, GENERATE HYDRO-ELECTRIC POWER AND DEVELOP IMMENSE AREA FOR RICE CULTIVATION.

By WELMAN BRADFORD, Alexandria, La.

With the promulgation of the "Acts of the General Assembly of 1920" for the State of Louisiana—Act No. 43 then becoming law—there will have been enacted one of the most important pieces of constructive legislation yet inscribed on the law books of this State.

This is the companion act to the constitutional amendment which was adopted at the last general election, granting the use of the waters of the State for irrigation, navigation and hydro-electric purposes, and which likewise provided that such developments should after 70 years of operation become the common property of the State.

The War Department on the 7th of February of this year issued to the Louisiana Gravity Canal Co., Inc., the right to impound and use the waters of the Upper Calcasieu for irrigation purposes, and the signature of the President to the Federal Power Act made it possible for the generation of hydro-electric power to be one of the proposed systems covered in the charter of the above-named company.

These laws, combined with the plans of the company, will open the way to the largest rice development system ever planned in the United States, and will place the rice industry of Louisiana on a solid basis so far as production and marketing are concerned.

The prairies of Southwestern Louisiana, covering an area of 1,937,766 acres, seem to contain all of the necessary requirements to form an ideal rice territory, with the exception only of good drainage and the necessary water supplies. The former is now being supplied by artificial drainage in open canals, and the latter will soon be furnished with gravity irrigation by a system of reservoirs and gravity canals.

The general plans of the Louisiana Gravity Canal Co. contemplate the control of the drainage of the entire area to the south of Red River from Shreveport to a point immediately east of Alexandria and the Cocodrie Lake, together with the "run-off" from all of the long-leaf pine region to the east of the Sabine Ridge, extending generally as far south as the Gulf Coast Railway, covering an area of 3,799,088 acres, and a system of reservoirs covering four natural basins of 53,000 acres, holding a total of 2,000,000 acres-feet of water for immediate irrigation.

This water control, in connection with the tapping of Red River above the city of Natchitoches, where there would be a gravity flow from that stream, which of itself would supply water sufficient for every acre of prairie lands, would constitute the water supply for the undertaking.

The drainage waters and "run-off" from these uplands would be ample to supply the whole area of prairie lands with irrigation waters, especially when we consider that the reservoirs would have in reserve sufficient to irrigate, without any rain during the growing season, the entire possible rice region of Southwestern Louisiana. These supplies, augmented with the gravity flow from the Red River, giving a factor of safety of more than 100 per cent, place the question of water supply beyond any doubt.

The Southwestern Louisiana prairie region is situated to the south of Bayou Cocodrie, with an elevation of 65 feet above Gulf level, extending southerly some 70 miles to the Gulf, with a fringe of marsh lying between the Intercoastal Canal and the Gulf of Mexico about 15 miles wide, and extending from east to west about 75 miles, and covering all of the rice region of the State except what is termed the "river section" along the Mississippi River and its tributaries.

The area actually in cultivation in Louisiana for the season of 1919 is 560,000 acres, of which the prairie region supplied 480,375 acres—the cash value of this crop being a total of \$53,420,000, of which, in round figures, \$47,000,000 was produced in the immediate region in the territory under the domination of the proposed development.

Heretofore all of these crops have been supplied by water pumped either from the sluggish tidewater streams emptying into the Gulf or from deep wells; either of these systems being more or

less defective in the quality and quantity of water furnished, or the extreme cost of operation.

The above prairie region seems by nature to have been divided into two regions, one lying to the west of the Mermonteau and Nezpique Bayou, with an area of 700,000 acres, the upper boundary of which has an elevation of 65 feet, gently sloping toward the south to its intersection with the marshes, where the Intercoastal Canal would form its natural boundary at an elevation of possibly four feet above tidewater. It gives generally a declination of about one foot per mile from north to south, and of less than a half foot per mile from east to west.

With the completion of the general plans there would be water under control to irrigate in round numbers 2,000,000 acres and the generation of 55,000 horse-power of electric energy, which latter could be increased to 100,000 horse-power when desired.

For economic reasons this development has been divided into three units, the first unit consisting of the control of the Calcasieu River and its upper water supply, with reservoirs holding 246,000 acre-feet, which, in conjunction with the "run-off" from 1,109,376 acres, would be ample to irrigate 480,000 acres of rice fields, using only one-half of the computed "minimum run-off" of the watershed and leaving a greater area of watershed to supply the present requirements of that section.

For this development the company has the requisite permit from the War Department under certain restrictions, requiring an escapement of water for navigation needs the year round, and under the "Federal Power Act" these surplus waters will no doubt be utilized in the generation of power to supply all of the local needs for electric energy.

The second unit contemplates the control of the Cocodrie Lake reservoir site and the construction of such main canals and principal laterals connecting with existing canal systems, so as to supply fresh gravity water to large areas of virgin soil, as well as the deep-well irrigation sections—and forming a junction with the system in the first unit, and supplying the remaining portions of the rice district with gravity water as fast as the necessary connections between canal systems can from season to season be constructed.

The third unit would, as a rule, be a large drainage and navigation canal intercepting the "run-off" from the watersheds on their courses to the present swamps, as well as carrying off the waters from Red River by the opening and control of the headgates, so as to supply water either for irrigation or power as might be required, and permitting holding in reserve the 2,000,000 acres-feet of water in the reservoirs as an emergency to be used when needed.

The expenditure of between \$6,000,000 and \$7,000,000 in the purchase of large areas of lands which would be of service in the three units, and the actual construction of the two reservoirs, and 41 miles of main canal and 40 miles of principal laterals, is what is now contemplated.

With the placing of locks at the Red River intake, open navigation would be afforded to all of the Upper Mississippi River and its connections with the Great Lakes, as is now under discussion.

And with the placing of a lock at a convenient point on the Mermonteau River there would be offered the very closest route for freight originating along the route of the canal into the port of New Orleans via the Intercoastal Canal.

By the placing of a similar lock on the Calcasieu River, as is now proposed for the Mermonteau, almost an air line would be had from Chicago by canal and river route to Southeastern Texas, using the Calcasieu River and Intercoastal Canal. The sites for these locks will be carefully selected with the view to deep water, as well as for hydro-electric stations, in conjunction with each other.

With the passage of three constitutional amendments, the enactment of several legislative measures, the co-operation of State and Federal departments, Southwestern Louisiana will be the beneficiary of a most unique system of industrial development, heretofore considered as being most visionary and absolutely impossible.

Progress of the Open Shop in West Virginia Coal-Mining Operations.

Charleston, W. Va., August 9—[Special.]—Despotic methods of the United Mine Workers in their efforts to organize all the non-union mines in West Virginia may have led them to overreach themselves, for there is a rather marked trend toward the open shop in West Virginia, there being at least two sections of the State in which the miners were formerly in the union fold but where the mines are now operated on an open-shop basis.

When the Bethlehem Steel Corporation took over the mines of the Elkins Coal & Coke Co. on the Morgantown & Kingwood Railroad, in Northern West Virginia, last October, and changed the name of the company to the Penn-Mary Coal Co., it was also announced that the mines would be operated as open-shop mines, although under the Elkins regime they had been operated as closed-shop mines. It was not until about July 1, however, that the United Mine Workers of District 17 took any serious cognizance of the attitude of the Penn-Mary Coal Co. Soon after that date, when the Penn-Mary Coal Co., as well as several other companies with mines on the Morgantown & Kingwood, refused to enter into negotiations with the United Mine Workers and to recognize the union a strike was declared in an effort to force the closed-shop policy on the companies mentioned. While the United Mine Workers have succeeded in getting some of the miners to strike, the larger proportion of them have remained at work, and where men have ceased work they have been to a large extent replaced, so that the United Mine Workers appear to be waging a losing battle. As for the Bethlehem Steel Corporation, it has openly announced that in opposing the closed shop it is only following a traditional policy, and it is no secret that the mines of the Penn-Mary company will be shut down before the company will yield to the demands of the miners' organization.

Declaring the closed shop un-American, a group of operators in the New River field, constituting about 10 per cent of the tonnage produced in that field, are operating their mines almost to capacity as open-shop mines. In other words, it is the announced policy of the companies belonging to the independent group not to discriminate between union and non-union miners. That policy was established and defined on the first day of last September, when all the operators of the New River field except the McKell Coal & Coke Co., the Willis Branch Coal Co. and several other companies, constituting, as stated, about 10 per cent of the New River tonnage, signed a contract with the United Mine Workers agreeing to the closed shop and the check-off. The McKell and other companies declined to become a party to the contract, and for a time their mines were shut down. But when, on November 1, the miners of the New River field under contract until March 31, 1920, deliberately broke that contract and joined in the strike of November 1, the open-shop mines began to operate again, their owners again reiterating their opposition to the closed-shop policy and to the check-off, but making it plain that miners, whether affiliated with the union or not, would be given employment. Since November 1 the independent mines have been gaining in production. While union miners, under instructions from the headquarters of District 20, have refused to accept employment at the McKell and other mines in the independent group, and while even force has been resorted to in order to intimidate the men who have been working, yet the strange part of the success of the open-shop mine owners in operating is that the bulk of their employers were formerly members of the United Mine Workers' organization who cannot again be induced to affiliate with that organization, even though surrounded on all sides by union miners.

As is probably well known, there are five large coal districts in Southern West Virginia which are unorganized. They are the Winding Gulf, Pocahontas, Tug River, Thacker and Logan fields. During the strike last November they were the only bituminous coal fields of the country in which coal was produced, and they saved the country from being frozen into submission to the demand of the United Mine Workers at that time. Prior to the November strike, however, as if in preparation for that strike, the United Mine Workers made an ineffectual effort to organize the Logan field through force, being responsible for the armed march of last September against that field, as a commission appointed by Gov-

ernor Cornwell has since determined. They failed to organize the Logan field because the miners in that field were not favorable to its organization.

As early as last January it became apparent that, having failed to organize the Logan field, the United Mine Workers would next attempt the organization of the regions further south, along the Norfolk & Western, John L. Lewis, president of the United Mine Workers, visiting Bluefield, W. Va., the latter part of January for the avowed purpose of starting a campaign for the unionization of the Norfolk & Western. He was given little encouragement, and for the time being apparently no further effort was made to bring the Pocahontas and other fields into the union fold. However, in the meantime the United Mine Workers concentrated their work in Mingo county, in the Williamson field, and succeeded in securing a good many recruits in that field, although not so many of the miners there as has been claimed. After several locals had been organized in Mingo county the United Mine Workers made a demand upon the operators that they recognize the union. That the operators refused to do. Upon such refusal, about the first of June, the United Mine Workers called a strike, and during the greater part of June and July approximately 75 per cent of the tonnage of the Williamson field was cut off because of the strike. However, one reason for such a general suspension of operations was found in the fear of miners not affiliated with the union of bodily harm if they did attempt to work, such a fear being justified by the frequent attacks upon operating mines by parties of striking mine workers hidden in ambush. However, late in July, when the State police of West Virginia and Kentucky guardsmen were assigned to patrol duty in the strike zone on each side of Tug River, and when it became apparent that miners desiring to work would be given protection, it immediately became apparent just how small a proportion of miners really did belong to the organization, although the minority had succeeded in cowing non-union miners into remaining away from the mines, for ten or a dozen companies which had suspended operations early in the strike were able to resume, although, of course, not producing to capacity.

In other words, early in August it had become apparent that the attempt of the United Mine Workers to extend its control over the mines into Mingo, McDowell and Mercer counties was doomed to failure owing to the opposition of the operators to the closed shop and to an opposition based on the belief that a contract with the United Mine Workers' organization was utterly worthless.

Open Shop the Paramount Issue in Texas gubernatorial Primary Race.

Austin, Tex., August 4—[Special.]—Joseph Weldon Bailey, former United States Senator from Texas, is making the open-shop question the paramount issue of his campaign for Governor. Taking the cue that was given him by the result of the recent Democratic primary election, when he received a plurality of the votes cast for the different candidates for that office, Mr. Bailey has renewed his attacks upon union labor more vigorously than ever, while his opponent, Pat M. Neff, in the run-off primary race is having nothing to say on the subject. Mr. Bailey's advocacy of the open shop has drawn to his support the solid business interests of the State. The farmers are also with him almost to a man. The second primary is to be held August 28. During the intervening period Mr. Bailey purposes to make open-shop speeches in every part of Texas.

Progress on Ohio River Dam Construction.

Parkersburg, W. Va., August 6—[Special.]—According to the annual report of Lieut.-Col. C. W. Ottwell, who is the Government engineer in charge of Ohio River improvement work, fair progress is being made on the construction of the three Government dams necessary to insure a nine-foot stage all the year 'round. Those which will be completed first are No. 23, near Millwood, W. Va.; No. 25, near Point Pleasant, W. Va., and No. 27, just above Huntington, W. Va. When they are finished it will be possible for the ordinary river boat to navigate the Ohio in both winter and summer. Lock and Dam No. 23 will probably be completed by the summer of 1921, and No. 25 not before the end of the year. Colonel Ottwell estimates Dam No. 27 will hardly be completed before the spring of 1922.

Recent Gas Developments in the Plains Country.

Oklahoma City, Okla., August 2—[Special.]—A gas sand with 650 pounds rock pressure and making in excess of 10,000,000 cubic feet daily has been discovered in Seward county, Kansas, near Liberal, and just a few miles over the Oklahoma line. It is over 100 miles west of the producing oil and gas regions of Kansas. Completion of the well by the Traders' Oil Corporation followed closely the completion of the Gulf Production Co.'s 27,000,000-foot gasser in Carson county, Texas, and both are discoveries of the Plains.

These new wells have caused renewed interest in a great expanse of Plains country. Wildcatters out there have taken the geologist at his word, who said that there is a connecting uplift between the Wichita Mountains of Oklahoma and the Rock Mountains, crossing the prairie country of Oklahoma, Texas, Kansas and New Mexico, and that north and south from that uplift should be found paying pools of oil. The theory held good in the discovery of the Amarillo gas field last year, and is now further strengthened by the Kansas gas discovery.

The Gulf well in Carson county extends the Amarillo field eastward and makes it proven 40 miles. The Kansas well is north-east over 200 miles. Between the two lays a great expanse of Texas and Oklahoma Panhandle that is being prospected. One of the most interesting of projects there has been started by Jack Harris of Oklahoma City, who is drilling a 4000-foot test a few miles north of Boise City, in Cimarron county. The location is near an abandoned well drilled by the Empire Gas & Fuel Co. over one year ago, in which some oil and gas were found. It is nearly surrounded by holdings of the big oil concerns, some of which were obtained as long ago as seven or eight years.

It is an almost unanimous opinion among men familiar with operations in that section in recent years that at least one of the major companies desired to withhold development there, believing that a great pool existed which would require more means and facilities for development than could be released from other high-pressure fields that have demanded attention.

Over 200,000 acres of land belong to the State in Cimarron county. Virtually all of it lies in a broken region of the north side and skirting the Cimarron River. Two barge blocks have been leased for oil and gas purposes. The Harris well is on State land, and in the northwest part the Segregated Oil Co. has a well under way. W. A. Durant, oil and gas agent of the State, is back from a tour of the county. He insists that no more State lands will be leased for mineral purposes until one or more thorough tests have been completed. Geological reports on structures are highly favorable.

Westward from the fields of Kay county explorations are increasing since discovery of a gas sand in Grant county that is reported making 25,000,000 cubic feet daily. Geologists returning from Garfield and Grant counties report nearly half a score of locations covering sections of the entire east half of the two counties. Leasing is reported active again in Woods and Harper counties, although in the former one or more deep dry tests were drilled several years ago. Beaver county and the northern part of Texas county, which lies immediately south of Seward county, Kansas, are attracting attention anew.

Wichita Falls operators have begun explorations in a region part of which has been approved by the United States Geological Survey, situated between the shallow pools at Granite and Gotebo, in Western Oklahoma. The first test in this project is to be drilled between Hobart and Granite. The location is several miles north of the Wichita Mountains, and is made in pursuance of the theory that the Wichita uplift threw off oil and gas sands north as well as south. Fields of Burkburnett and of Cotton and Stephens counties, Oklahoma, are credited to the Wichita uplift on the south. In Custer, Roger Mills, Beckham, Washita and Caddo counties 15 or 20 tests are scattered over probable producing territory of the north side.

The Newitt field of Carter county is developing into a second Healdton, with the outlook for a larger and more productive field than the Healdton. New and deeper sands are being found and a minimum number of dry holes have been drilled in explorations north, northwest and northeast. Nearly all intervening territory in the general region of the pools of Fox, Graham, Poolville, Oil City, Keller and Loco is being tested and wildcats are strung from

50 miles up into Murray and Garvin counties. In the latter the Magnolia Petroleum Co., in the Robberson district, made one of the chief gas discoveries of the year.

At least two wells of the eastern side of Stephens county are now producing from deeper sands. Probably 150 wells in that region are producing from sands found at 350 to 900 feet. In nearly every township of the shallow-sand area one or more deep tests are being drilled. Two are in the Cruce gas field, a few miles east of Marlow.

The Maramee Oil & Gas Co.'s discovery well at Maramee, in Pawnee county, stopped flowing recently after a gas trap was installed. The well was then cleaned and swabbed and came back with a flow of 1400 barrels daily, which was a third larger flow than originally recorded. Latest reports are that it has settled back to about 700 barrels.

A well near Edmond, Oklahoma county, is on a sand showing oil and gas at about 2000 feet. Casting has been set for a test. Formations have been encouraging. The location is on the highest point in this part of Oklahoma, between Kansas City and the Gulf.

Twenty locations are reported made in Lincoln county since the discovery a few weeks ago of a gas sand that made 20,000,000 cubic feet daily. Three deep tests are drilling in the southern part of Pottawotomie county. Two are drilling in Cleveland county. Two are drilling in McClain county. Nearly all likely territory in these two counties is under lease, with holdings of the major companies distributed over the region.

Not Discouraged by Failure to Find Oil in Northeastern Louisiana Fields, and Large Scale Developments Will Continue.

Monroe, La., July 31—[Special.]—Although oil has not yet been found in paying quantities in the Northeastern Louisiana fields in the campaign that has been under way for nine months, leaders in developments in this field state that the search will not be abandoned, and that the big operating companies are prepared to pour into this region \$10,000,000 or more in the belief that the "mother pool" will be found.

Five or six million dollars will be expended in Ouachita and Morehouse parishes during the next year in the construction of additional carbon plants. Expenditures that will result in doubling the number of carbon plants in this field, 24 at present, will be made by the Southern Carbon Co., the Monroe-Louisiana Carbon Co., the Federal Carbon Co., the Atlas Oil Co. and one or two additional new corporations, besides branch plants planned by carbon companies that have been here since the natural gas field was started.

The Northeastern Louisiana Oil and Gas Association has completed a survey of the Ouachita-Morehouse field, which shows there are 58 gas wells in the two parishes. Not more than one-half of this output of gas is being used. The survey has been presented to the Monroe Chamber of Commerce, which will undertake a widespread campaign to induce manufacturing plants to locate in the two parishes, as it is believed that natural gas in practically unlimited quantities as a source of fuel and power will prove a great inducement to manufacturers.

Not one of the 58 wells drilled in this territory, says the survey, has proved to be a dry hole; the field has a defined area of 103.5 miles, but is as yet unlimited in its possibilities for gas, which is found at a depth of 2000 to 3000 feet. The average daily output of gas is 500,000,000 cubic feet.

Showing of Oil in Morehouse Parish, Louisiana.

Monroe, La., August 7—[Special.]—Oil, believed to be in paying quantities, has been discovered by Ridge & McLaughlin at Zachary No. 1 well, in Morehouse parish, one-half mile west of Jones, La., and about five miles south of the Arkansas line. W. R. Ridge, formerly of Kansas City, informed your correspondent that he believed his firm has uncovered the "mother pool" of Northeastern Louisiana, but that it will be impossible to state this definitely until a test has been made, in about two weeks. As a result of the showing of oil, there has been an influx of oil men to Jones, and this little village of 200 inhabitants is unable to accommodate the strangers. Expert oil men on the scene express every confidence in the outcome. Paying sand was discovered at 2400 feet.

Burkburnett Field Still a Good Producer Despite Adverse Reports.

Burkburnett, Tex., July 31—[Special.]—It was two years ago in July that oil was discovered at Burkburnett. Since that time approximately 60,000,000 barrels of crude petroleum have been taken from the pool. At the present price of \$3.50 a barrel the product would have a total value of \$210,000,000, but inasmuch as the price was low during the first year of production the actual money that the crude oil brought was perhaps around \$150,000,000. Notwithstanding the fact that reports have been widely circulated that the Burkburnett field is practically exhausted the daily production is now around 86,000 barrels, which is only about 18,000 barrels below the peak output of the pool.

It is asserted that the Burkburnett field has made more millionaires than any other field in the United States. It never attracted the larger oil operators. From the very start it was the scene of small investments, made for the most part by novices in the petroleum industry. Scores of these tenderfoot operators have become millionaires. Some of them who entered the field on a "shoestring" are now at the heads of large oil-producing, pipe-line and refining companies; others are bank presidents or occupy other high positions in the business and financial world. Of course, the landowners, mostly poor farmers, profited enormously as a result of the discovery. Included in the millionaire list are many of these former tillers of the soil, who now spend their time traveling about in their big six-cylinder automobiles, with diamonds as big as hickory nuts upon their fingers and shirt-fronts.

Few fields in this country have experienced such exciting development and such waste of oil as has Burkburnett. During all last year small acreage was the order of development, and hundreds of companies were organized on lease holdings ranging in size from a town lot to five and ten acres. The natural consequence was what is termed close drilling, and many single acres of land in the field now have from two to a half dozen derricks.

The development of the Burkburnett field has been rapid, coming just at a time when there was ample money in circulation for wild speculation. In the strict sense of the term there was no wild-cat territory in the district. Every individual and every company felt sure of production and most of them got it.

Though there has been two years of intense development, the field does not yet appear to be entirely defined. Production is still advancing to the northwest, already having encroached on the borders of the Red River. There also appear to be new pools opening up to the south of the townsite, as several companies have recently developed good production there at a depth around 1200 to 1300 feet.

It is stated by petroleum engineers that the Burkburnett field is in a true oil sand, a very rich sand and of sufficient thickness to insure long-lived production. Present indications are that the field, even if there are no further extensions, will for many years to come be one of the most productive fields in the whole country.

Progress of Mississippi Oil Drilling.

Pascagoula, Miss., August 7.

Editor Manufacturers Record:

The Seacoast Oil Co. of Pascagoula has begun drilling its first well for oil. The site selected is at Crooked Bayou, at the confluence of the Pascagoula and Escatawpa rivers, in the city of Moss Point, and just five miles north of the Louisville & Nashville Railroad.

On July 14 the Georgia Oil Co. of Atlanta began the work of putting down its first well for oil at Helena, Miss., which is on the Alabama & Mississippi Railroad, nine miles north of Pascagoula. This latter company is being financed entirely by Georgia capital; the company has never offered any stock for sale, nor has it any stock on the market. R. H. Bruce, vice-president, who has had extensive experience in the Texas and Mexican oil fields, is the organizer of the company, and is directing its operations. Mr. Addison L. Martin of Atlanta, Ga., is a director of the company, and is here with Mr. Bruce superintending the work.

The well that this company started has been progressing favorably, and at this writing is down about 700 feet.

CHAS. E. CHIDSEY.

Many Millions Expended for Oil Derricks and Vast Quantities of Lumber Required.

Austin, Tex., July 30—[Special.]—An enormous amount of timber has been used in the construction of oil derricks in Texas during the last three years. For one derrick alone of the average height of 85 feet, 30,000 feet of lumber are required. The cost of this material is approximately \$6000. It is estimated that there are at this time 7000 to 10,000 derricks in Texas, which, at the average cost of \$6000 each for lumber alone, brings the total amount expended on these necessary adjuncts of the petroleum industry to \$42,000,000 to \$60,000,000.

An expert rig builder uses only the very best pine and hardwood obtainable in the construction of derricks, it is stated. Although the best derricks are those built of rough lumber, surfaced timber is largely used in sections where the supply of the former is limited. Where materials and workers are hard to get, steel derricks, constructed so that they may be bolted together, are used. In Texas, however, wood is the favored material.

Although to the average person a rig builder may appear a very ordinary individual, he is really a man of great importance in the petroleum world. In fact, were it not for the rig builder there would be perhaps no oil wells. As in other lines, there are inferior workmen as well as experts. A derrick erected with the main idea of getting the job done as cheaply as possible is like a house built on the sand, and is very likely to topple over on slight provocation, assert experienced oil men. But those derricks that are built as derricks should be built, of selected materials, by expert workmen, will withstand anything short of an earthquake or one of the terrific gas blowouts with which some localities in Texas are unfortunately afflicted.

Oil derricks have been built where it was possible to land the timbers by railroad train almost on the location, and again in out-of-the-way places where heavy pieces of lumber had to be hauled probably a hundred miles from the nearest station.

An expert derrick crew can build a rig in 24 hours, if necessary, and when it is completed it will handle any kind of tools that can be hung on it. From crown block to platform one of these first-class structures will take care of the heaviest work possible in drilling and stand up under any ordinary condition, and perhaps extraordinary ones also. The sight of an expert crew "running up" an 85-foot standard derrick is one not soon forgotten. Big, powerful, brawny men handle the heavy timbers, which are sawed together in series, and when hoisted into position, to the amazement of the uninitiated onlooker, always fit to the fraction.

Derricks range in size from 75 feet up to 112 feet. About 85 feet is the standard derrick and the one most commonly used in Texas. The 112-foot mast is used for the big rotary rigs and for the very deep holes.

Hauling timbers to the derrick sites is often a serious problem. For weeks at a time the roads have been in an almost impassable condition. While many of the larger companies have their own fleets of motor trucks and do their hauling at a minimum cost, the smaller independent operators are forced to pay exorbitant prices for the movement of derrick and other material. Then again, the larger companies have the advantage in the matter of being able to employ well-organized crews of derrick builders which move from place to place as development work may require. The smaller concerns must pick up their workmen the best they can.

Skilled derrick builders are about as independent a set of men as are to be found in this country. They rank along with the tool dressers in the matter of wages. The scale paid carpenters upon derricks ranges from \$15 to \$25 a day. Helpers receive \$5 to \$3 a day. The demand for these mechanics in the oil fields during the last two years has almost depleted the cities and towns of the State of this class of builders.

Large Type Cement Barge Placed in Service.

A cement barge 135 feet long, with a 30-foot beam and 18 feet deep, was launched recently at Beaufort, S. C., by the American Shipbuilding and Dry Dock Corporation. The barge has a dead-weight capacity of 1300 tons, weighs 375 tons and was built for the coal and lumber trade. It draws 15 feet when loaded to capacity and only three feet six inches when empty, and is said to be the only barge of its type in this country, being modeled on a pattern which has been in use some 15 years in France. The vessel carries a steel barge rating.

Large Reclamation Work Continues in Delta Region Despite Retarding Influences.

Memphis, Tenn., August 9.—[Special.]—Reclamation work in the Delta region of the lower Mississippi Valley has been retarded, but not entirely held up, by the stress of the times. Tightness of money, the railroad difficulties, the high cost of everything and a general nervousness have combined in holding development projects to a minimum, but some big projects are getting under way in the region about Memphis. Most of them involve the draining of large areas of rich bottom land.

The steady increase in demand and in value of the fertile alluvial soil in the immediate lower valley has caused landowners to exert more than ordinary effort at development. They have seen land double, treble and increase even ten times in a couple of years where drainage has been completed. They have seen bottom-land farms yield enormous crops, sometimes enough to pay for the land in a single year, and the wisdom of getting the idle and semi-idle acres into steady production is not being discounted.

One of the biggest new projects in the immediate Memphis vicinity is to drain and protect 170,000 acres of rich bottom land in Phillips and Desha counties, in Eastern Arkansas. The land is a "neck" extending 32 miles in length between the Mississippi and White Rivers, and just above the point where the White River empties into the Mississippi. More than three-fourths of the district is in Phillips county, of which Helena is the county-seat. The project will involve an expenditure of approximately \$2,000,000. Actual construction work will begin next spring, the commissioners having just selected the firm of Harrington, Howard & Ash of Kansas City to handle the engineering problems.

Because of its low nature, the entire district needs drainage, a problem not difficult to solve. The greatest trouble will be to prevent overflow caused by the White River "backing up" when the Mississippi is at high stage. This will be met by building levees to hem in the White. A pumping system to pump out accumulated water in a portion of the district probably will be installed. The region now has protection against overflow from the Mississippi, for the levee system has been completed, or practically so, along the entire east border of Arkansas. The commissioners of the district are George E. Blackburn of Helena, O. D. Howe of Wabash and W. W. Meacham of Snow Lake, Ark.

Work has been started in clearing out trees and undergrowth in Drainage Districts Nos. 8 and 9 in Mississippi county, Arkansas. The work is under the direction of the Morgan Engineering Co. of Memphis. Hereafter effort will be made to keep down such growth, for it blocks effective drainage.

Another new and big project in the Memphis region is in the east half of Scott county, Missouri, a short distance above the Missouri-Arkansas line and on the Mississippi River. Drainage District No. 10 has been organized, and plans for reclaiming 30,000 acres of the richest bottom lands, prepared by the Morgan Engineering Co. of Memphis, have been filed and approved by the county court. Construction work will begin next spring. The district is very level, and is menaced at times by water from the hills and from water originating within the district. The main drainage canal will be more than 50 feet wide. The west half of Scott county now is drained by the famous Little River Drainage District, said to be the largest in the world. This district already is producing some of the record yields of all kinds of crops in Missouri, as the land is alluvial or "delta" land similar to that in Eastern Arkansas, Eastern Louisiana and Western Mississippi. It has been usual for \$15 to \$25 an acre land to increase in market value 500 to 1500 per cent after drainage work is completed, and a continuation of the big program in the Memphis region means a growing area of richly productive trade territory.

Tour of Arkansas Profitable Farming Bureau.

The fourth farming tour of the Arkansas Profitable Farming Bureau of the Board of Commerce, Little Rock, was made July 31 to August 9, and included in its itinerary Americus and Athens, Ga.; South Carolina cities and towns, and Wilson, N. C. The party was composed of Arkansas farmers, planters, bankers and merchants, each of whom paid his own expenses, the object of the tour being to secure information enabling the members to secure more profitable results from their farm lands and livestock.

Texas City Sold to Chicago Interests.

Texas City, Tex., August 9.—[Special.]—Augustus S. Peabody of Chicago has just purchased the extensive deep-water port facilities and terminals here of the Texas City Transportation Co. The Central Trust Co. of Illinois brought suit against the Texas City Transportation Co. for the foreclosure on a first mortgage which it held against the property. The sale to Mr. Peabody was made to satisfy this mortgage, the consideration being \$500,000.

The property acquired by Mr. Peabody consists of 1200 acres of land, three miles of undeveloped water frontage and what is said to be the largest and best-equipped dock and warehouse terminal point on the Texas coast, with the single exception of that of the Galveston Wharf Co.

The present facilities consist of two large piers with fireproof warehouses, two oil docks, a 500,000-bushel capacity reinforced concrete elevator, several fireproof land warehouses, 40 miles of switch and storage yards and the terminal railroad connecting the docks with the Southern Pacific, the Galveston, Houston & Henderson, the International & Great Northern, the Missouri, Kansas & Texas, the Gulf, Colorado & Santa Fe and the Galveston-Houston Electric Co. A large power plant and railway shops are also included in the deal.

The purchase of the property does not, it is stated, in any way disturb the leases held by a number of companies, including the pierce Oil Corporation's large refinery and shipping dock, the shipping facilities of the Humble Oil & Refining Co. of Houston and those of the Vacuum Oil Co., nor the three high density cotton compresses, two of which are at shipside.

The developed terminal property, covering over one-half mile of water frontage, gives berthing room at the present time for 22 vessels. There is room on the property, it is stated, for three miles more of dock and warehouse development, all served by the Government's 30-foot channel.

During the season just closed 339,003 bales of cotton have been received, large quantities of grain, sulphur, lumber, oil-well machinery and general supplies have been exported, and importations of sisal, crude oil and other products from Mexico have been extensive. Several million barrels of crude oil from the Texas fields have been exported to Eastern refineries during the past several months.

The Vacuum Oil Co., a subsidiary of the Standard Oil Co., is now building storage tanks and an oil terminal at Texas City preparatory to shipping crude oil to Northern markets. The White Oil Corporation has also acquired 800 acres of land as the site for a refinery.

Large Sash and Door Plant to Be Erected in Dallas.

Dallas, Tex., August 6.—[Special.]—Announcement is made that the Huttig Sash & Door Co. of St. Louis, Mo., is organizing a subsidiary to be called the Dallas Sash & Door Co. for the purpose of building and operating a large plant here for the manufacture of doors and window sashes.

The Huttig Sash & Door Co. was founded at St. Louis 35 years ago, and is a \$1,000,000 concern, occupying 7½ acres of ground at the home plant. The Dallas branch will be the fourth to be established inside of four years, the others being at Memphis, Birmingham and Jacksonville, Fla.

E. M. Doughty, who has represented the Huttig company here since February, 1917, will be in charge. He said yesterday that the business over Texas would be handled from Dallas, and that he believed the trade from here would extend over other Southwestern States and Mexico. The first unit of the local plant will have at least 20,000 feet of floor space.

The president of the company is A. J. Siegel of St. Louis. He offered his plant to the Government at the time the United States entered the war, and it was used largely for the manufacture of airplanes for more than a year. A good deal of ship material was also turned out at the Huttig plant.

Although no definite statement could be obtained as to the approximate size of the Dallas plant, it was stated that it would be built in units so that more buildings could be erected as they are needed. The Dallas Sash & Door Co. will be incorporated with an initial capital stock of \$50,000.

\$915,000 Contract Awarded for Cisco's Big Dam.

Cisco, Tex., August 4—[Special.]—The contract for the construction of Cisco's giant dam across the Sandy, three miles north of the city, has been awarded to H. F. Friedstedt of Chicago. With deductions for credits, the Friedstedt bid was approximately \$915,000. The specifications call for a reinforced hollow concrete dam, known as the Ambursen type.

When completed the dam will be about a quarter of a mile in length and 125 feet in height. It will impound 15,000,000,000 gallons of water, which will cover 1000 acres of land at an average depth of 75 feet. The specifications call for 37,000 yards of concrete; 12,000 pounds of asphalt; 1,750,000 pounds of reinforcing steel; 50,000 linear feet of lumber; 2700 feet of hand rail, and 90,000 cubic yards of galvanized-iron pipe. Ninety thousand yards of earth excavation will be required, 5000 yards of rock excavation and 20,000 yards of overhaul. A standard rail line, three miles in length, will be built from the Missouri, Kansas & Texas Railroad to the dam site.

Rapid progress is being made with the preliminary work. A gang of about 60 Mexicans, employed by the city, has practically completed the task of clearing away the trees and underbrush from the bed of the lake.

The site of the proposed dam is generally regarded as ideal for a huge water reservoir. Massive boulders cover the two hills, which are soon to be artificially united. From these points the contours dip sharply to the bed of the creek below. Huge draws empty into the basin from every direction, and will themselves be filled with water when the dam is completed, giving the lake an approximate shore line of 35 miles.

Cisco is at present supplied by water from Lake Bernie, two miles west of the city, and which covers about 80 acres, and the Canon Lake, which is about 50 acres in extent. The existing lakes impound about 1,000,000,000 gallons, the water passing through two large filtration plants before reaching the city.

Big Irrigation Enterprises Projected in Mexico.

Monterey, Mexico, August 6—[Special.]—It is planned by the new Government of Mexico to put through a number of large land reclamation projects in the near future. Preliminary steps toward the construction of dams across different rivers and the building of canals and ditches have been already taken in the way of surveys. Some of these surveys were made as far back as the administration of the late President Porfirio Diaz, and others were accomplished during the administrations of Madero and Carranza. The Government has begun the construction of a dam across the Yaqui River, in the State of Sonora. This dam will create a storage reservoir sufficient to water about 40,000 acres of valley lands. The Government has also pledged its financial support to a private enterprise that is preparing to build a dam across the Altara River, State of Sonora, and construct a system of irrigation to cover 50,000 acres of land. The Sautena Syndicate, which began the construction of a great irrigation system in the northeastern part of the State of Tamaulipas several years ago, has resumed work upon the project. It is the purpose of the Sautena Syndicate to irrigate about 800,000 acres of land. The water supply will be obtained from the San Juan River. At the time Diaz was ousted from the Presidency plans were well advanced for the construction of a dam across the Nazas River for the purpose of storing water to irrigate a vast area of the rich Laguna region, which is the principal cotton-producing territory of Mexico. This project was set aside during the revolutionary period, and has now been revived. It is stated that the original surveys will be used.

Coal Shipments by Barge Increasing on the Kanawha.

Charleston, W. Va., July 30—[Special.]—Just as the volume of tonnage handled on the Ohio River is being rapidly increased, so also the tonnage of freight handled on the Kanawha River is showing a rapid increase. That is especially true as to coal shipments. For instance, in June 127,120 tons of coal were handled in barges, as compared with only 27,120 tons during May. That represented an increase of 100,000 tons. Despite such increases, however, barge shipments have not quite reached the levels of the war years, June shipments in 1918 being 131,460 tons. In June, 1919, barge shipments had dropped back to 54,000 tons.

The Monongahela River Now Safeguards Pittsburgh's Industries—Waterways Developments Urged by National Rivers and Harbors Congress.

Wheeling, W. Va., August 12—[Special.]—S. A. Thompson, secretary and treasurer of the National Rivers and Harbors Association, while in West Virginia early in August gave out a statement urging speedy action to secure the construction of the Erie & Ohio River Canal, in the course of which he said:

"I find that there is a more general use of water transportation now than there has ever been before because of the breakdown of the railroads. Many business men whom we could not interest in the subject of river and harbor improvement a few years ago are now strong advocates. I wish to call attention to the work that is being done in Pittsburgh. The building of the Lake Erie & Ohio River Canal has been agitated for a number of years. Pittsburgh would be greatly benefited by the canal. Yet, strange to say, the industrial interests in and about Pittsburgh had done very little to further the project. I find now they are becoming aroused and they realize now that the building of the canal ought to be pushed, and, in fact, may become essential to Pittsburgh's continued supremacy in the iron and steel business.

"While in Pittsburgh the other day a prominent manufacturer made the astounding remark to me that it was only the fact that they were able to keep up navigation on the Monongahela River that kept Pittsburgh going at present. If Dam No. 6, in the Monongahela River, should give way or be put out of use, more than 75 per cent of the productive capacity of Pittsburgh industry would be closed down. The tonnage on the Monongahela River has become tremendous. On one day of July, for instance, in 19 hours and 24 minutes, Lock No. 4, on the Monongahela River, had 31 lockages up and 39 lockages down; 20 steamers passed up the river and 22 down; 95 barges passed up and 130 barges passed down; 28,000 bushels of coal passed up and 101,200 tons of coal passed down. Just think of that; one lock passing in 19 hours 101,200 tons of coal, as much coal as could be carried in 2000 freight cars. On July 3, Lock No. 3 carried 79,400 tons of coal from the Monongahela down to Pittsburgh and other sections, and the entire traffic on the Monongahela this year runs over 24,000,000 tons. I am pleased to learn that the tonnage on the upper Ohio is increasing rapidly. I felt confident that as soon as the river improvements were completed the river would be put into use by the big manufacturer and fleets of barges would bring the coal and ore to them and other barges would carry their products to the South and the West. That day is coming, and it is not far away.

"I am going from here to Detroit, where I will address the convention called by the Detroit business men for the purpose of stimulating interest in the proposed improvements of the St. Lawrence River. Detroit has become ambitious to become an ocean port. The Canadian Government has just completed the great Welland Canal, which has capacity to carry ocean-going steamers, and will be able to carry them around Niagara Falls. East of Lake Ontario there are some 46 miles of rapids in the St. Lawrence River. These rapids at the present time prevent large ocean-going steamships from reaching the lakes by way of the river. The Detroit people are starting a movement to have this section of the river improved by various dams. They are asking the joint action of the United States Government and the Canadian authorities. They figure that the water-power thus obtained would amount to about 4,000,000 horse-power; that the sale of this alone would pay for the improvement. Should a series of dams and locks sufficient to control these rapids be constructed, ocean-going steamships can go through the Welland Canal and anchor in any lake port. This means that Cleveland, Detroit and Chicago will practically become ocean ports, and to my mind this also means that if the upper Ohio Valley is to hold its leading place as the manufacturing center of America, it must build the Lake Erie & Ohio Canal to connect the Ohio River with this great ocean transport system."

With the object of making more widely known the timber resources of the British Empire, the Department of Overseas Trade has organized an exhibition on a large scale in London, at which practically every wood-producing country in the empire is represented and where no fewer than 800 different kinds of wood are exhibited.

Chesapeake Iron Works Doubles Capacity of Its Structural Steel Plant

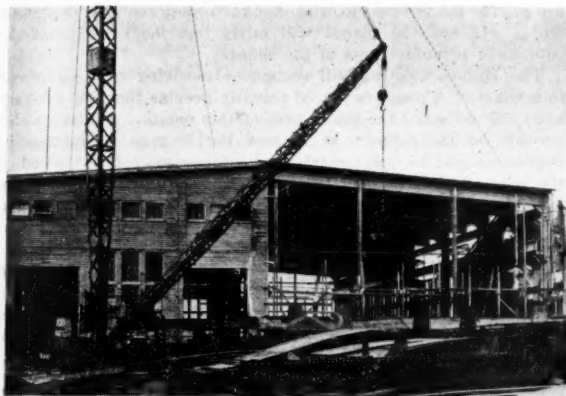
The Chesapeake Iron Works, builder of steel structures and bridges, and specializing in the manufacture of Chesapeake electric traveling cranes, is increasing the capacity of its structural steel department 100 per cent. Enlargement of the plant was undertaken in order to insure efficient methods for decreasing operating costs and increasing production that would aid in the solution of the problem of unrest and high prices. The company is also utilizing a portion of its high efficiency machine shop facilities on general machine work for outside concerns not organized, as it now is, on a "maximum production" basis.

The present plant of the Chesapeake Iron Works covers about five acres of land at Westport, Md. The new building shown in

hoists, pneumatic riveters, portable electric and air drills, etc., large boring mills, large automatic gear cutters and other machinery of a most up-to-date machine shop. The Chesapeake Iron Works pays special attention to the work of spur gear cutting, and to general machine work. Its automatic gear cutters permit the company to turn out large gears for its cranes with the utmost efficiency. As the Chesapeake men are all trained on a "maximum production" basis, with this strictly modern highly efficient crane service and machine shops the Chesapeake Iron Works claims not only to be in a position to turn out Chesapeake electric traveling cranes with the highest efficiency and utmost dispatch, but it is said to be able to take care of a large quantity of general machine work in the production of the most accurately built heavy-duty machinery for other manufacturers.

The new plant, when completed, gives the company a capacity of about 1000 tons output per month, or 12,000 tons output per year, and the works will give employment to about 300 men.

Addition of the new building, equipped with new special machine tools and appliances to accomplish this 100 per cent increase in the structural steel fabricating output of the company, is part



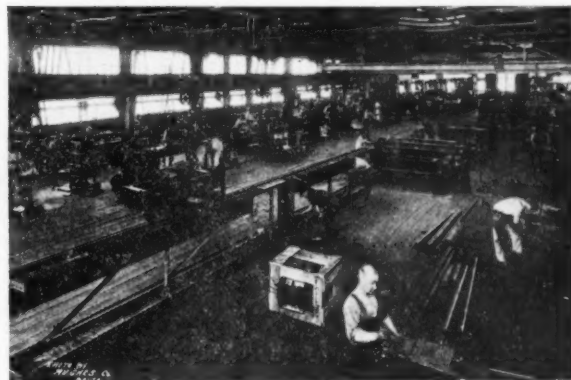
NEW STRUCTURAL STEEL PLANT.

the accompanying illustrations is a view of the southern end and a glimpse of the interior. It is 210 feet long by 60 feet wide, and about 35 feet high.

Operating throughout the building's entire length will be a Chesapeake electric traveling crane of 20 tons capacity and 58-foot span. In addition to this big 20-ton crane, two one-ton 20-foot span Chesapeake electric traveling cranes will also be installed. These latter cranes will be utilized to handle "bull riveters." Over 140 large Chesapeake cranes were on war service throughout the United States and abroad, operating continuously in railroad, steel and ordnance plants, in foundries, etc., all through the war-rush period.

The building will also be equipped throughout with the latest material-handling devices. Along with a full equipment of Chesapeake electric traveling cranes there will be a number of electric installed for smaller operations.

In the machine shops are the latest types of heavy-duty lathes,



INTERIOR VIEW OF MACHINE SHOP.

of a well-considered plan of President F. S. Chavannes to put his company on a basis of the highest efficiency in all departments. No effort has been spared and considerable new capital invested to secure this result. The entire business, engineering and operating staffs of the Chesapeake Iron Works have been directed to concentrate their efforts on the attainment of the greatest possible reduction of costs and increase in production without loss of quality.

President Chavannes, whose concern will soon enter its nine-



VIEW OF CHESAPEAKE IRON WORKS AT WESTPORT, BALTIMORE, MD., BEFORE COMPLETION OF RECENT ADDITIONS.



15-TON, 110-FT. SPAN CHESAPEAKE ELECTRIC TRAVELING CRANE, WITH 5-TON AUXILIARY TROLLEY. ONE OF FIVE INSTALLED AT BARTLETT HAYWARD COMPANY'S BALTIMORE PLANT.

centen year as a fabricator of steel structures, states that his company's intensive "efficiency campaign" as mentioned in a recent editorial of the MANUFACTURERS RECORD has accomplished much in the matter of increased efficiency of both employees and plant.

The Railroad Rate Advance as It Affects Southern Roads.

Editor Manufacturers Record:

Atlanta, Ga., August 7.

The rate decision of the Interstate Commerce Commission apparently gives to the railroads of the Eastern and Western groups the advances they estimated would be required to yield the revenue prescribed in the Transportation Act, 1920. It is logical to assume, therefore, that with the consequent increased revenues and the resumption of a normal amount of expenditures for additions to roadway facilities and equipment that are necessary to keep pace with the growing commerce of the country, pre-war service in those districts should soon result.

It is questionable if the same results can be realized from the advance allowed the roads of the Southern group. The Commission's decision, according to its own estimates, will produce a net railway operating income for the roads of the Southern group of approximately \$120,000,000. This is less than the earnings of the roads in this group in the pre-war period. During the six years ending 1917 this income averaged \$126,000,000 annually. During 1916 and 1917 it averaged \$163,000,000, and in 1918 it was \$147,711,910, while the standard return for the roads of this group, on the basis of which they were reimbursed for their use by the Government during the Federal control period, was \$138,231,020.

As it can hardly be claimed that the roads of the Southern group have been overprosperous, the limitation of the operating income to a level below that formerly enjoyed does not hold out a glowing prospect for development and improvement. The physical condition of the properties of the roads in the Southern group on the average is inferior to the roads in the more populous districts of the East and North, and it would appear that the Southern region, under the conditions as fixed, cannot expect the improved roadway facilities and equipment that the proper handling of its growing traffic demands.

The Commission is manifestly taking up its duties under the Transportation Act, 1920, with a full realization of its responsibility for the transportation service of the country, and if it appears that adequate provision for the needs of the Southern group has not been made, it is believed the Commission will not hesitate to make such other increases as may be found necessary when the facts are properly before it.

B. L. BRIGG, President.

Atlanta, Birmingham & Atlantic Railway Co.

Florida East Coast Railway Co.

New York, August 6.

August 6, 1920.

Editor Manufacturers Record:

I consider that the increase in rates to meet additional costs and wages and improve the earning power of the railroads will help the transportation business of the country as a whole, but do not believe that the rate allowance for railroads in the Southern district will meet the necessities in that territory.

W. H. BEARDSLEY, President.

President Markham's Enthusiastic Work to Make Effective for the Public the Rate Advance.

Illinois Central Railroad Co., Office of the President.

Chicago, Ill., August 9.

Editor Manufacturers Record:

I fully share your optimism in regard to what will be the effect of the great constructive act of the Interstate Commerce Commission in recognizing the needs of the carriers, and in providing what seems to be suitable relief for them. The immediate result will be a quick response on the part of the carriers by enlarging their facilities as rapidly as it is possible to do so. Already conditions are changing for the better, and the improvement will continue steadily until the carriers have fully caught up with the demands for transportation.

Some of the carriers have doubtless already placed orders for new equipment. It goes without saying that those that have not are getting ready to do so, and that the orders for new equipment which will soon be placed will fairly test the capacity of the equipment manufacturers of the country.

The Illinois Central will commence receiving new equipment immediately. Contracts placed recently provide that 200 flat cars are to be delivered the latter part of this month. Contracts also provide for the delivery of 25 new Pacific type locomotives in September and 50 new Central type locomotives before the end of the year, while in October there will be delivered 1000 new refrigerator cars, and before the first of the year 35 new passenger cars. This is merely the start toward carrying out a constructive program which the directors have adopted.

The owners, managers, and, I think, a large majority of the employees of the carriers are enthusiastic over the new Transportation Act and the broad manner in which it is being applied by the commission. They are determined to make a success of it, which means that the country is entering upon a long period of unexampled prosperity.

C. H. MARKHAM.

"Contentment Under Roof."

The human-nature element in modern industry has been largely taken into consideration in a little book recently published by J. E. Serrine & Co., engineers, of Greenville, S. C. "Contentment Under Roof" for the factory worker is now the concern of every large employer. It can no longer be a matter of small concern to the manufacturer where or how his employees are housed. Indifference on this subject, long before the present acute situation in housing accommodations, invariably reacted against the careless factory owner and brought labor unrest which could have been avoided. Today it is considered elementary for an employer to plan for the welfare and comfort of his employees. If he fails to do this, his labor goes to competitors who are more enlightened. Some of the housing problems of the cotton-mill owner are discussed in this booklet, and an interesting phase of the whole subject from the engineering standpoint is the necessity for planning one kind of a development for a Southern cotton-mill property and another quite different for some other industry or factory where the problems are quite dissimilar.

Virginia School Census Shows Substantial Gains.

Richmond, Va., August 2—[Special.]—A school census of Virginia has just been completed by the Virginia State Board of Education, which shows that practically every city in the State has increased substantially in the number of children of school age in the last five years, and that a goodly number of the counties have increased in the same period. The State, according to this report, now has 680,924 children of school age, 137,077 of them being in the cities and 543,847 being in the counties. This is a gain since 1915 for the cities of 15,244 and for the counties of only 6754.

The greatest city gain is, of course, in Richmond, which was 3074. All the cities except Charlottesville, Staunton and Portsmouth showed gains. The cities named showed small decreases, aggregating only 379.

Wide county leads all of the counties in the State in the percentage of gain, regardless of the fact that it is a county with no large towns.

Ford Purchases Large Michigan Hardwood Area.

In line with his plans for controlling and developing the supply of raw materials for his great automobile works, Henry Ford has recently purchased 400,000 acres of hardwood timber land in upper Michigan and is considering the construction of a huge woodworking plant that will employ 2500 men and turn out the various wooden parts required for the Ford cars. The plant site, which will cover approximately 2000 acres, is located about one mile from the city of Iron Mountain. Initial work has been started on the large sawmill, which it is estimated will be completed by January 1. Three miles of railroad track for the transportation of supplies is being constructed to the plant site. The various additional units that will make up the completed plant will be added from time to time, so that eventually it is estimated that the complete plant will employ between 2000 and 2500 men.

Although this vast area of 400,000 acres of timber land, to which Mr. Ford has secured rights, contains approximately 350,000 acres of hardwoods, steps have been taken to carefully conserve the supply. The entire area will be carefully surveyed and the big timber marked for cutting. Every possible means will be employed to protect the young trees in felling the old and thus allow for the perpetuation of a continuous future supply of hardwood timber.

Recent announcement was made of the purchase by Mr. Ford of the Detroit, Toledo & Ironton Railroad to insure an ample coal supply for his great plants at Detroit, and his latest move in acquiring this large area of hardwood timber indicates the wise plan he is following to provide for a steady and continuous supply of the main materials required for his industry.

It was lately announced that during the last fiscal year just ended nearly 1,000,000 motor cars and tractors were turned out by the Ford organization, and that in the next fiscal period it was planned to produce 1,250,000 cars and tractors.

The United States Geological Survey Criticises Claims Recently Published in Behalf of Great Southern Sulphur Co.'s Operations.

Department of the Interior, United States Geological Survey.

Washington, D. C., August 3.

Editor *Manufacturers Record*:

An item in your issue of July 8 regarding the property of the Great Southern Sulphur Co. in West Texas has been brought to my attention. The statement that "the Director of the United States Geological Survey visited the mines and expressed his approval of the plant" is absolutely incorrect. The only foundation for this statement is the visit last April of Dr. Philip S. Smith, geologist of the survey, who has made a special study of the sulphur deposits of the country. In my absence from the Washington office Dr. Smith serves as acting director, but never uses that title except in that connection, and as Dr. Ritter is personally acquainted with us both, there can be no question of mistaken identity.

The facts of Dr. Philip S. Smith's visit were that he found no one on the property except two boys who were acting as caretakers. He found a few hundred tons of sulphur material stacked up, and though he described some of this material as "looking pretty good," he doubted the assistant's statements that the material would run 95 per cent sulphur. This was his second visit to the deposit, and a new open pit offered him opportunity to examine a section of the deposit, which impressed him less favorably than on the previous visit. It is plain, therefore, that Dr. Ritter is incorrect in saying that Dr. Smith expressed his highest approval of the plant, nor is there any more basis for quoting a statement that the deposit was the "greatest and purest sulphur deposit in the world." No geologist in the survey would submit an estimate of 600,000,000 tons on the basis of what appears to have been visible at the time of Dr. Smith's visit. Dr. Smith is now in Northern Alaska, else he would make this denial in even more emphatic terms. * * *

I need not qualify my absolute denial of either the authenticity or accuracy of the statements attributed to the Director of the United States Geological Survey.

GEO. OTIS SMITH.

Transporting Cement by Electric Railway—How a Louisville Company Solved the Car Shortage Problem.

Louisville, Ky., August 9—[Special.]—As a result of using interurban transportation between its cement mills at Speeds, Ind., 12 miles from Louisville, and its warehouses here, the Louisville Cement Co. has been able to supply the J. B. Speed Company, its selling agent, representing a subsidiary company, all of the cement needed.

When car shortage became bad during the war period, and priority orders interfered with shipment, the company started trucking cement by road, but found that the expense was enormous. A round trip represented a 25-mile haul, and over roads which were not the best. This was very hard on trucks, and far from satisfactory.

The company then made arrangements with the Louisville & Southern Indiana Traction Co. to haul cement on flat cars from the mills at Speeds to a siding in Louisville. In damp weather the cement was covered with tarpaulins. Solid trains of three cars of cement were brought down at one time and placed on the siding, where they were transferred to trucks for local delivery either on the job or to the warehouses.

The company has since secured a lease on a warehouse building adjoining the traction company's car barns, and plans to unload directly to this platform and carry a stock of some 1500 barrels on hand.

In order to render better service in bad weather the traction company is now building some box cars which will be used in handling the cement, and has also ordered some larger and more powerful motors, which will make it easier to handle heavier trains.

Sidings at Speeds, Ind., have been improved to reduce handling and save time. Shipments leaving the mills are in Louisville in a little over an hour, ready for unloading.

The company claims that the cost of transportation by interurban is slightly under the cost by steam rail, and far under the cost of motor-truck transportation. The speed made between the mills and local siding is also far greater. In the days when steam lines were depended upon, cars were often delayed in the yards for days at a time before being switched and spotted.

As a result of using electric railway transportation the company has been enabled to run its mill at a good steady clip; the only difficulty has been in securing coal for operation of the mills.

New Warrior River Containers Now in Use.

New Orleans, La., August 9—[Special.]—Another trade outlet was opened to New Orleans August 6 through the cheaper transportation of internal waterways, when the first containers, devised to carry cargo to the Warrior River section and the interior country connected with river points on that stream, were loaded. This service is part of the Mississippi-Warrior barge line established two years ago by the Government.

These containers are of 10-ton capacity each, built of steel, and made to fit four upon a flat car. Loaded at the factory, they are railroaded to the specially built 10-ton derrick that comprises part of the Government's river-service facilities at New Orleans, and hoisted aboard the Warrior barges returning to the Warrior region after discharging their cargo of coal here. Arrived at their river destination, they are hoisted upon flat cars and so carried to final destination.

The river connections are Mobile, Tuscaloosa, Demopolis and Birmingham, Ala. The last named is the water terminal of Birmingham. Through freight connections with railroads, based upon the 20 per cent reduction of the water rates, is had with Atlanta, Chattanooga and other interior points.

The importance of this service is not only that the Warrior River barge line is given a return cargo, thereby reducing the cost of operation of the line and insuring its maintenance, but also that New Orleans, through the cheaper transportation, is able to reach into territory it touched heretofore only in high spots.

The shipment loaded Saturday was sugar from the American Sugar Refinery, destined for Mobile. Delivery is made within 48 hours, which is said to be quicker than rail delivery to the same point.

Ten containers have been built; 200 have been ordered. They are being built in Birmingham.

NEWS AND VIEWS FROM OUR READERS

[Publication in this department of letters from our readers does not mean that we either approve or disapprove the views expressed. We believe in a full and frank discussion of the mighty questions of the hour, for only in this way can the truth be found. Therefore we often publish letters with which we do not agree.—Editor Manufacturers Record.]

Holdenville, Okla., Wants Glass Factory.

W. J. RYAN, Holdenville, Okla.

Holdenville, Okla., has natural gas and wants all kinds of factories. We especially desire a glass factory. We have what is called the best glass sand in the United States, and it is hauled through our city to a point 45 miles north to a glass factory there.

A Strong Tribute to a Strong Paper.

W. B. TROY, Power Farming Association of America,
Jacksonville, Fla.

The purpose of this letter is to call your attention to a copy of the Florida Times-Union, that we are sending you under separate cover. We wish to call your attention to the editorial page of this issue of Wednesday, July 28. The writer of this has made a very close survey of the editorial columns of the Times-Union and other papers claiming the same distinction before the public as rightfully belongs to the Times Union, and we find that the Times-Union's editorial columns have given more space to editorials of a progressive nature than any other three papers coming under our survey.

We want you to especially note the homogeneity of the four leading editorial articles in this particular issue under these headlines: "Big Co-operative Business," "Nature Lovers and Sportsmen," "Power Machinery on the Farm," "The Parties and the Farmers." We want to call special attention to the editorial "Power Machinery on the Farm" as evidence that this paper is sold on the idea of power farming.

We expect to hold in Jacksonville, Fla., August 26 and 27, the most constructive power farming demonstration ever held in the South.

Average Cost of Lumber in Houses Built of Wood Shown in Test Case to Be Only 16 Per Cent.

J. H. DOWLING, Secretary-Treasurer The Dowling Company,
Odessa, Fla.

On page 94 of your issue of July 29 there appears an article containing certain information as furnished the Senate by the Forest Service of the Agricultural Department, in which it claims that the "abnormally high prices of lumber" were partly responsible for the slump in housebuilding. As I am a very ardent supporter of your paper, and feeling the very great influence that it carries the country over, I do not feel that I would be doing justice to myself and the industry of lumber manufacture were I to continue letting such articles go unnoticed and continue the feeling among so many of the public that lumber was the prohibitory article in homebuilding.

For our own information, we have had compiled by one of the best-known architects of the South, information covering the building costs of average wooden bungalows. We had this cost sheet cover an average of 12 such houses, varying in size from five to eight rooms. The costs which we used were the present-day prices of all commodities used in the building.

It might be of interest to you and a number of the readers to learn that the cost of the lumber for these houses on an average was 15.99 per cent of the total cost. Now, these figures were based on "wooden" houses, not veneers or otherwise. The item of millwork and finish was twice as great as the lumber; the labor 3 per cent greater, and the insignificant item of painting alone was 13 per cent of the total cost.

I bring these matters to your attention, as I feel the lumber industry is being greatly and unjustly abused by such articles and the statements made by people wholly misinformed as to the actual lumber conditions.

[The statement was issued by the Forest Service, and the MANUFACTURERS RECORD published it only on that basis, and so stated. We are glad to have Mr. Dowling's reply.—Editor MANUFACTURERS RECORD.]

Suggests Standardized Construction to Help Meet Shortage of Homes.

J. H. ALLDREDGE, Secretary-Traffic Manager, Dothan, Ga.

The shortage of houses, which is becoming more acute every day, has reached the point where it constitutes a very serious problem, and is retarding development in many communities in the South. The uncertainty of the cost of construction is one of the deterrent factors in this problem. Men with limited means, who constitute the majority, hesitate to undertake the building of homes on account of the inability to forecast the ultimate cost.

It seems to me that if we had a building company in the South with sufficient capital behind it that could standardize construction and perform every operation from the manufacture of the material to the erection and final sale of the homes, it would help to solve the problem.

Says Heavy Coal Exports Cause Serious Shortage to Domestic Industries.

J. E. BURLERSON, President the J. E. Burlerson Mica Co.,
Spuce Pine, N. C.

We have a sufficient quantity of coal in the United States to take care of the manufacturing industries and for all domestic use for years, provided this supply is taken care of. But we are not going to have it very long if the Government continues to allow the present exports of coal. The coal producers are using every effort, with the assistance of the railroads, to get out and export all the coal they possibly can. And at the rate they are sending it out of the United States today, it cannot be many years until our supply will be exhausted and the manufacturers of the United States will have to shut down on account of lack of fuel.

In the first part of this year our plant here and mines had to be shut down, and we were damaged about \$10,000, because the producers had accepted orders for coal for export and would not fill our orders. And today we have to beg for coal in order to get it. This is what is causing the car shortage. Every car that can be got is hauling coal to be exported, and the people and the industries of the United States are suffering on account of this situation, which is hurting the business of the country badly.

Is the Government going to allow this to go on until our coal supply is all consumed? The foreigners have bid the price of coal up so high that it is almost impossible for industries to buy, or even for the people to purchase it for home use.

The old saying is "Charity begins at home." First serve your own house, then, if you have anything left, divide with your neighbor. In this case it is not being done. The foreign countries are being taken care of and our home people are going without coal. If the situation continues as it is until winter comes, the people are going to suffer.

Is the Government going to allow this to go on, or are they going to stop this drainage to foreign countries?

[Our coal exports amount to less than 5 per cent of our production, and if we quadrupled them they would not in a hundred years appreciably lessen the supply of coal in our country. The coal producer has just as much moral and legal right to export coal as has the cotton or wheat grower to export their products.—Editor MANUFACTURERS RECORD.]

There were on deposit in State banks alone in West Virginia on June 30, according to figures compiled by State Banking Commissioner J. S. Hill, a total of \$154,440,268.50, that representing an increase of \$25,507,895.45 over the deposits in State banks on June 30, 1919. The biennial report will show that there has been in a period of two years a growth in the resources of West Virginia State banks of nearly \$40,000,000.

THE IRON AND STEEL SITUATION

Pittsburgh Steel Operations.

Pittsburgh, Pa., August 9—[Special.]—Throughout the iron and steel industry much gratification has been expressed that the Interstate Commerce Commission, in adjusting freight and passenger rates, has given the railroads practically all they asked, and has indeed given them, according to the commission's interpretation, the full limit allowed by the Transportation Act. The industry has no objection to paying the higher freight charges that are imposed. It is true that when the rate case was pending there were various complaints and representations made by iron and steel interests, but all these were ex parte, one group of interests seeking to have the advances fall more strongly upon others. Thus the "inland" blast furnaces—those removed from Lake Erie—objected to there being a large increase in iron-ore rates from Lake Erie docks, and wanted the rates from mine to lake increased, while the lake front furnaces wanted it the other way. The lake front furnaces won.

There has been a further improvement in shipments of pig-iron and steel products, and the progress seems to be quite satisfactory. The producers manifest an indisposition to admit the full extent of the improvement, probably because they have contests right along with many customers who think they should be receiving better deliveries. Shipments are probably about equal to the production of finished steel, but hardly to the production of crude steel, some of the mills being forced to hold a little of their steel from day to day in semi finished form, to be finished later. In a few cases some inroads have been made on the accumulations of steel, but in general the accumulation of something like 2,500,000 tons remain. What the effect upon the market will be when this steel is moved to consumers, in addition to the current production, is problematical. One theory is that the extra steel can be moved only when rail traffic conditions all around have been so improved that general business will be stimulated and consumptive requirements will be correspondingly increased. Another theory, however, is that during this freight congestion many buyers have been trying to hoard material, and that when deliveries are free and prompt they will be much less anxious to get material than they have represented themselves to be in the past two or three months.

Car supplies to Pittsburgh district coal mines have increased materially. The steel mills and by-product coke ovens feel little, if any, scarcity of coal, and while the diversion of a great deal of coal to the lake trade, as recently ordered, has occasioned some uneasiness, the probability is that the whole matter will move off smoothly. The disposition to criticize and complain is so general in these times that not much attention is paid to the talk. For illustration, the team track mines have organized in an effort to secure relief in the matter of their poor car supplies, as alleged, while the Pittsburgh Coal Operators' Association has addressed complaints to the State and National authorities that the team track mines are getting too many cars.

The second 30-day period of the coal mine car priority order runs out 10 days hence, and it is possible that by about that time the car supplies will be such as to uncover a "labor shortage," which means chiefly an unwillingness of the miners to work full time, whereby the priority order can be relaxed further. There have been two relaxations since the original order of June 21, both made chiefly at the instance of the iron and steel industry, whereby now flat-bottom gondolas measuring under 38 inches high inside are not to be considered coal cars. A large number of cars has thus been released for general service, and the iron and steel industry has gotten at least its share.

The steel industry is quite in sympathy with the efforts of the railroad managements to secure greater efficiency from their physical equipment. Indeed, there was a lot of propaganda from the iron and steel industry in favor of full-car loading before railroad men themselves seemed to take much interest in the subject, though at the meeting of railway heads in New York July 16 there was a unanimous pledge to make every effort to secure a 30-ton average in loading, the pledge covering also efforts to bring the average freight-car travel up to 30 miles a day, to reduce bad order cars to under 4 per cent, eliminate unfit locomotives and return all cars to owner roads.

Production Slightly Decreased.

Production of pig-iron in July was at a rate $2\frac{1}{2}$ per cent less than the rate in June, this being a smaller decrease than usually occurs in July, when the humidity is high. While blast furnace operations have been hampered for months past by insufficient coke supply, the slight decline in pig-iron production can hardly be ascribed directly to that influence, for the reason that when high humidity cuts down the pig-iron production of a furnace the coke consumption per ton of pig-iron is increased, and it is probable that in July the blast furnaces really consumed coke at a greater rate than in June.

The report of steel ingot production in July is not yet made public, but it may be estimated that the rate was between 2 and 5 per cent below the June rate, which would make the rate about 41,000,000 gross tons of ingots a year, or 35 per cent more than the average in 1912 and 1913, the two best years before the war. The fears expressed a month ago before the Interstate Commerce Commission, that the iron and steel industry would have to decrease its production if more cars for shipping the product were not furnished, have been allayed. By modifications of the coal car preference order a slight difference was made, and the entire transportation service of the railroads has increased. The probability now is that the industry will not only be able to maintain its production, but also increase it in the next two or three months, provided, of course, there is a sufficiency of orders. At the present time there is no indication of there being any such development in the near future.

Car Shortage Continues to Dominate Birmingham Iron and Steel Market.

Birmingham, Ala., August 9—[Special.]—While sales of pig-iron are still being made in the South, with every now and then a small tonnage for spot delivery, if possible, at \$1 or \$2 premium, inquiries coming in for iron for delivery during the first half of the coming year, there is considerable consternation in the Southern iron market by reason of the acute car shortage. There is an accumulation of pig-iron that does not feel comfortable and there is some pinch, financially, by this inability to move out the product. The output at furnaces in this district continues steady. The intra-district transportation facilities are being given every attention, so far as possible, but to deliver pig-iron out of the district and sometimes right in the home territory is quite a different proposition. There is no doubt but that the iron market will continue strong for a long time to come yet. Indication is given in the inquiry that consumers will need the product for months to come. There is a willingness to pay the \$42 per ton, No. 2 foundry, 1.75 to 2.25 per cent silicon, as asked. No relief in the near future is to be seen in the railroad car situation. More than a month's make is estimated to be on yards in this district, and many consumers are requesting delivery on their contracts. Within another month the selling into next year will be quite general, \$42 per ton, No. 2 foundry, f. o. b. furnaces, to be the quotation. With the exception of a few small lots at \$43 and \$44, there have been no sales to show the market taking on an increased price. Raw material is being closely watched, and the intra-district transportation facilities are sufficient to handle enough raw material to the furnaces to keep up the operations. The iron market is considered very strong, the principal condition being the inability to deliver. Every effort is being made to get cars, appeals being made to the State and the interstate commissions, but without avail. Cast-iron pipemakers are suffering in a similar manner, and have much stock made up and ready to ship. Quite a little tonnage of pipe has been shipped from this district by water to California, but the ship room, too, is limited.

Home consumption of pig-iron is holding its own, pipe plants, foundries and machine shops, sanitary pipe industries, radiator works and other iron-molding plants all having splendid contracts in hand. The Birmingham Pipe & Fittings Co., Knox Conville, executive office, is about completed, and some operation has started in.

Steel mills are working at more than 80 per cent, all plants considered. Fabricating and steel-consuming plants are feeling the

delays in deliveries. Considerable of the products of the steel mills is to be exported, inquiries being steady. F. Nadal of Santiago, Cuba, was in Birmingham this month, visiting the steel plants of the Gulf States Steel Co. and others. Mr. Nadal is connected with a firm that purchases considerable tonnages of nail and wire.

The launching of the Montgomery City, fifth steel boat of the Chickasaw Shipbuilding & Car Co., Mobile, subsidiary of the Tennessee Coal, Iron & Railroad Co., has been postponed until next Saturday, August 14. Advice has been received that the Birmingham City, the second of the steel boats of the Chickasaw company, has arrived in Japan with its cargo of iron and steel, lumber and other things, mainly from the Birmingham district. Just as quickly as these boats are completed and tried out they are loaded with products of the Birmingham district and sent on their way to foreign countries. It is understood that the United States Steel Products Co., the subsidiary of the United States Steel Corporation in charge of the export business, will have use for all the boats being turned out at the Mobile plant, a large amount of the products of this section of the country to be shipped abroad. Steel being used in the shipbuilding plant at Mobile is being hauled down the Warrior River from the Birmingham district, the barge line proving able to handle the business when the railroad car shortage was so acute. The fleet of boats built in Mobile and sailing from that port will in the course of time handle a large tonnage of Birmingham iron and steel, as a very extensive foreign market is opening up for this section.

Negotiations are being completed for the location of a plant of the American Enamel Iron Products Co. of Chicago in Birmingham. Fourteen acres of land has been purchased near the by-product coke plant of the Sloss-Sheffield Steel & Iron Co., gas to be gotten from the larger industry. The enamel works will melt between 40 and 50 tons of pig-iron daily, and enamel ware, bath tubs and fixtures, will be produced. The company has a large domestic business besides a healthy export business.

Following a meeting of the board of directors of the Alabama Power Co. the past week, announcement was made that the company would install the sixth unit at the big hydro-electric plant at Lock 12, on the Coosa River, bringing the capacity of the plant up to 105,000 horse-power. The installation of this unit will better enable the company to meet the large demand for power throughout the State. The work will be completed in about a year. While the water flow of the Coosa River will not permit all of the units to operate continuously, the company has concluded that it should proceed with this work because for the limited period during the year which it can operate. It will conserve a large quantity of coal.

Announcements are made that the Lehigh Portland Cement Co. has purchased 93 acres of land on which are beds of limestone at Tarrant City, a few miles removed from the city limits of Birmingham, and a large cement plant is possible. The Marquette Cement Manufacturing Co., Chicago, has options on a site for a large cement plant, it is stated, John C. Barker, assistant to the president of the company, making personal investigations into possibilities of this district. The big plant of the Atlas Portland Cement Co. at Leeds, in the northeastern part of Jefferson county, is so very far behind in deliveries on old contracts that new business is being refused every day. The Coosa Cement Manufacturing Co. at Ragland, about 30 miles east of here, will resume operations shortly, Kansas City interests having purchased the plant. It is almost impossible to purchase cement and get delivery, the local industry being around 3,000,000 barrels short.

The coal production in Alabama shows a little improvement, the fight of the operators against any recognition of the union being continued. Strikes are still on in the domestic coal fields of the State, between 2000 and 3000 men being idle. Through big advertisements the operators are advising the public of the breaking of contracts by the union mine workers and the work of "agitators" in getting men to strike or to remain out on strike after having quit work. The striking men decline to leave the houses in the various mining camps, and legal action has been taken to get possession of these houses. Some new labor is being put to work in the striking mines. Where there is no union men employed, or where the strike has not reached, the operation is very strong and production heavy. The railroad car shortage during the past week interfered with the output, some efforts being made to bring about a very heavy production in some portions of the district. Several new mines are under project for development in the next

few months, the expectations being there will be demand for coal for a long time to come, export business being in sight.

The coke production is far below the demand. This industry also feels the car shortage. Very few new contracts have been given consideration in this district in the last few weeks. One of the larger producers and consumers of coke was found seeking the product from friends in the district. The Republic Iron & Steel Co. is putting a little coke aside for any emergency that may arise, the company having but two of its blast furnaces in this district in blast. The by-product coke ovens of this district are being worked to the fullest capacity. Coke prices are holding firmly, \$12.50 per ton for 72-hour foundry and \$10 to \$11 for the 48-hour furnace coke being the quotations. Every now and then a little spot coke is sold at from \$1 to \$3 per ton more than this price.

The scrap iron and steel market in the Birmingham district continues looking up, and there is confidence that in the near future general conditions will be as good as might be expected. One of the larger consumers of heavy melting steel has had an offer for a large tonnage at \$22.50 turned down, while dealers in old material are strong in the demand for \$24 to \$25. Even Chattanooga dealers in old material have declined to accept heavy melting steel contracts on a basis of \$22.50. Other products on the list of the old material dealers are being held for the higher price, the market becoming firmer. Stocks are in fairly good shape, with no big contracts being received. Confidence is expressed by all old material dealers. Local consumption of scrap is on the increase.

Quotations for pig-iron and scrap iron and steel in the Birmingham district are as follows:

PIG-IRON.

No. 2 foundry, 1.75 to 2.25 per cent silicon, f. o. b. furnaces, \$42; No. 1 foundry, 2.25 to 2.75 per cent silicon, \$43.70; iron of 2.75 to 3.25 per cent silicon, \$45.40; basic, \$42 to \$43; charcoal, \$55.

OLD MATERIAL.

| | |
|----------------------------|--------------------|
| Old steel axles..... | \$31.00 to \$34.00 |
| Old iron axles..... | 30.00 to 33.00 |
| Old steel rails..... | 20.00 to 25.00 |
| Heavy melting steel..... | 24.00 to 25.00 |
| No. 1 R. R. wrought..... | 23.00 to 25.00 |
| No. 1 cast..... | 33.00 to 35.00 |
| Stove plate..... | 27.00 to 30.00 |
| Old car wheels..... | 30.00 to 32.00 |
| Old tramcar wheels..... | 31.00 to 33.00 |
| Machine-shop turnings..... | 11.00 to 13.00 |
| Cast-iron borings..... | 11.00 to 13.00 |

Coal and Coke Production Shows Decline.

The strike of day men in the Middle West caused the production of soft coal during the last week of July to drop below the 1919 level for the first time this year, according to reports of the United States Geological Survey. The total output, including lignite and coal coked at the mine, is estimated at 9,357,000 net tons, a decrease when compared with the latest pre-strike week of 1,523,000 net tons.

Telegraphic reports of coal loaded by the principal carriers indicate that production recovered but little on Monday, August 2, but that since then there has been steady improvement.

The year 1920 is more than 18,000,000 tons behind 1917, and more than 37,000,000 tons behind 1918, but is 44,500,000 tons ahead of 1919.

Unlike the production of soft coal, that of anthracite increased during the week ended July 31. Shipments originated by the principal carriers (in part estimated) amounted to 36,487 cars, the largest since mid-June. The total output, including mine fuel and local sales, is estimated at 1,874,000 net tons. This was 104,000 tons greater than that of the preceding week, and 62,000 greater than during the corresponding week of 1919. Cumulative production since January 1, 1920, now stands at 50,575,000 tons, as against 47,307,000 tons in 1919.

A decrease of 15,000 tons marked the production of beehive coke during the week ended July 31. The total output is estimated on the basis of shipments over the principal carriers at 370,000 net tons, 4 per cent less than that of the preceding week. Production in the Connellsville region, as reported by the Connellsville Courier, decreased from 182,145 to 172,870 tons. The cumulative output since the beginning of the year now amounts to 12,386,000 tons, an increase of 15 per cent over 1919.

The first week of operation of the amended Lake order (Service

Order No. 10) saw 775,318 tons of soft coal dumped at Lake Erie ports. This was 112,712 tons more than the dumpings of the preceding week, which had been the largest of the present season, but was still below those of the corresponding period of 1918 and 1919. The cumulative Lake shipments from the beginning of the year now stand at 6,814,074 net tons, as against 12,163,000 in 1918 and 13,188,000 in 1919. The year 1920 is thus in round number five and a third million tons behind 1918 and six and a third million behind 1919.

Tidewater shipments during the week ended July 31 established what is believed to be a new record for coal handled over tidewater piers in a single week. The total dumpings at the four North Atlantic ports and Charleston, according to reports furnished the Geological Survey by courtesy of the American Railroad Association, were 27,461 cars. This exceeded the preceding week by 1771 cars and was 4661 cars greater than the weekly average for June, 1920, hitherto the maximum month.

Monthly Report of Steel Ingot Production.

The monthly production of steel ingots from January to July, 1920, as reported to the American Iron and Steel Institute, New York, by 30 companies which made about 85 per cent of the steel ingot production in 1919, is as follows:

| Months. | Gross tons | | | Total. |
|--------------------|-------------|-----------|------------|-----------|
| | Open hearth | Bessemer. | All other. | |
| January, 1920..... | 2,242,758 | 714,657 | 10,687 | 2,968,102 |
| February | 2,152,106 | 700,151 | 12,867 | 2,865,124 |
| March | 2,487,245 | 795,164 | 16,840 | 3,299,049 |
| April | 2,066,336 | 568,952 | 13,017 | 2,638,305 |
| May | 2,251,544 | 615,932 | 16,688 | 2,883,164 |
| June | 2,287,273 | 675,954 | 17,463 | 2,980,690 |
| July | 2,135,633 | 653,888 | 13,297 | 2,802,818 |

Increased Transportation by Water of Pennsylvania Coal and Better Car Facilities by Rail.

Uniontown, Pa., August 7—[Special.]—Return to its pristine glory as one of the great transportation arteries in the Western Pennsylvania industrial territory is seen in the July shipments on the Monongahela River. Faced by one handicap after another in rail transportation, coal companies owning properties along the river are extending their river transportation with the result that the coal shipments in July, even with the first five days practically barren as a result of the Fourth of July holidays, topped the previous record made in the preceding month by nearly 400,000 bushels.

The United States Steel Corporation and its subsidiaries hold extensive coal operations along the river, and the Carnegie Steel Co., one of the subsidiaries, is placing additional steamers and ordering a large number of new barges for river transportation. The H. C. Frick Coke Co., another subsidiary, has installed a tremendous underground haulage system in its Fayette Klondike region mines, extending to mines as far back as seven miles from the river. The coal, principally by-product fuel, is thus transported underground to the river and dumped directly into barges. The Youngstown Sheet & Tube Co. is probably the second largest river shipper at present. The Youngstown company has a huge coal operation at Nemaculin which is being enlarged rapidly, and which within the next two years is expected to be the largest single mining operation in the world.

A few days ago a party of officials of the United States Steel Corporation, headed by James A. Farrell, made an inspection trip to the operations along the river with a view to studying transportation possibilities there.

A large number of smaller independent operations are springing up at points all along the river as far as Fairmont.

The report of shipments through Lock No. 4, on the Monongahela, for July follows:

Going down (to Pittsburgh territory), lockings, 738; steamers, 433; boats and barges, 2205; rafts, 1; other craft, 20; bushels coal, 41,171,000; bushels coke, 391,450; other products, 118 tons; timber, 32,000 cubic feet; lumber, 175,000 feet board measure; merchandise, 2454 tons.

Going up, lockings, 708; steamers, 432; boats and barges, 2224; other craft, 18; bushels of coal, 270,000; iron products, 75 tons;

sand, 12,000 bushels; timber, 9706 cubic feet; lumber, 120,000 feet; merchandise, 404 tons.

Approximately \$1,000,000 is being expended by the Government in the enlargement and improvement of locks and dams on the river.

The biggest feature of the week just closing has been an increased car supply for coal and coke plants in the Connellsville region, due, it is stated, to the effect of Interstate Commerce Commission rulings on open-top placements. Experienced observers see in this situation an early break in peak prices both for coal and coke.

The Monongahela Railroad during the week moved more than 3200 cars of coal, at least 2700 of these going to destinations chosen by the operator. The car supply for the region was 53 per cent coke cars and 60 per cent coal cars, the first time in many weeks that better than 50 per cent placement has been noted. The peak in placements was during the first half of the week, with the supply tapering down the second half, something like 85 plants being forced into idleness during the last two days of the week.

Due to the improved car placements, the priority Orders Nos. 10 and 11, providing for Lake and New England delivery, have failed to interfere seriously this week in the Connellsville region. The operators, given a week's quota for shipment, generally have made their priority shipments at one time and are showing a tendency to co-operate in every way to meet the situation. The priorities, however, have resulted in three distinct prices for coal. Tidewater market has been maintained at around \$13; New England price quotations are \$8 to \$8.50, while the maximum for Lake shipments is around \$7.

While the spot coke market so far remains firm around \$18.50, there are indications of an early break in the price. Large buyers are standing off on purchases, due in many instances to their own difficulties in securing other raw materials or shipping finished product. Some of these mills have been in the market for surplus stocks of coal, but in most instances these offers have been withdrawn during the past few days.

With indications of a return to near normal car placements, a new factor which promises to become serious is looming. That is labor shortage. During the past six months large numbers of foreigners in the region have departed for their native lands, with the result that they will be missed when normal operation again is possible in the Connellsville region. Operators, however, are taking steps to guard against this phase of the situation.

Fear Blow at Warrior River Transportation.

Birmingham, Ala., August 9—[Special.]—Considerable agitation is on in the Birmingham district in reference to the St. Louis & San Francisco Railroad fixing the Cordova station as the point of interchanging freight instead of at the port of Cordova, on the Warrior River. The De Bardeleben Coal Co. has sold all of its rights in the Cordova port to the Government, operators of the transportation facilities on the river, and this was taken as the basis for refusal of handling freight to the port without a charge of switching from the station. The fear is expressed that with no opposition to this proposed blow at the Warrior River branch a dangerous precedent for the river's future development will be set. The State Public Service Commission is being appealed to, looking to the designating of the port of Cordova as the point of interchange. It is set forth that if the precedent is allowed to stand, nothing would be in the way for similar action to be taken at other points on the river, possibly Port of Birmingham, on which the citizens of this district have expended upwards of \$260,000. The Interstate Commerce Commission will also be appealed to, the claim being that to make the station of Cordova, three-fourths of a mile from the port, as the point of interchange, charging a car-switching assessment for handling the freight to the port, would be plans of throttling the river transportation possibilities.

Alabama is making an effort to land the experiment station that is to be located by the United States Bureau of Mines in the South. The race for the location narrowed down to the University of Tennessee, at Knoxville, and the University of Alabama, at Tuscaloosa. Both places are located in a favorable mining and industrial section.

Good Roads and Streets

Splendid Results Attained from Federal-Aid Road-Building Program in Past Four Years.

Washington, D. C., August 9—[Special.]—The unprecedented stimulus given highway construction in the United States in the four years that have passed since the Federal Government entered upon its policy of aiding road improvement, is shown by the fact that road operations under the Federal-aid road act thus far initiated aggregate in length nine times the distance from New York to San Francisco, according to Thomas H. MacDonald, Chief of the Bureau of Public Roads, United States Department of Agriculture. The Federal Government's share in this stupendous undertaking is greater than the cost of the Panama Canal. The participation of the National Government in highway improvement marked a departure from a policy which had been followed for nearly a century. Federal co-operation with the States on approximately a "50-50" basis has counted more than any other factor, says Mr. MacDonald, in initiating highway construction that is being carried on under adequate supervision, and in accord with a program co-ordinating local, State and National needs.

Second only in importance to the size of the present road-building program is the excellence of the character of the roads being built. Sixty per cent of the total allotment of Federal funds which has been approved to date will be spent for roads of such durable types as bituminous concrete, Portland cement concrete and vitrified brick. These roads, when built, will increase by 7600 miles the total of 14,400 miles of roads of this class which existed in the United States before the Federal-aid road law was passed. But these figures by no means represent the total mileage affected.

In 1915 the total expenditure for roads and bridges by all the States and local governments was \$267,000,000, while this year the estimated funds available for main-road construction are nearly three times that amount, or \$633,000,000. In all, Federal funds to the amount of \$266,750,000 have been apportioned among 48 States without a suggestion of favoritism, so adequate are the provisions for a just apportionment.

One of the early and most far-reaching results directly attributable to the adoption of the Federal-aid program was the creation of adequate State highway departments in 17 States which previously had either no State department or departments insufficiently equipped. Within one year after the passage of the Federal-aid road act more constructive State highway legislation was placed upon the statute-books than had ever been enacted in a similar period in the history of the country.

The insistence of the Government upon the construction of Federal-aid roads under the supervision of engineers of the State departments has resulted in placing a much larger proportion of road work under skilled direction. In 1915, the year before the Federal-aid act was passed, only 30 per cent of the money for roads and bridges built in the United States was expended under the supervision of State highway departments. This year these departments will exercise control over fully 80 per cent of the large sums that will be spent for road building.

Arkansas and Louisiana Highway Association Formed

Monroe, La., August 7—[Special.]—Representatives of seven Louisiana parishes and four or five Arkansas counties met at the Monroe Chamber of Commerce yesterday and organized the Arkansas and Louisiana Highway Association for the purpose of promoting a highway from Little Rock, Ark., to Alexandria, La., along the Missouri Pacific Railroad by way of Monroe for a distance of about 250 miles. The gathering here was held under the auspices of the local Chamber of Commerce and the Board of Trade of Dermott, Ark. New Orleans and other Southern Louisiana cities are urging the Arkansas and Louisiana Highway Association to make the organization a tri-State affair, including Missouri, and to promote a highway from St. Louis to New Orleans. Men behind the association state that this plan may be incorporated at a later date.

To Celebrate Completion of Central Highway Link.

Raleigh, N. C., August 6—[Special.]—The admirably constructed stretch of highway, surfaced with Warrenite, between Raleigh and Cary, 8½ miles, is finished, and there is to be a celebration in honor of the event. The highway was built by the people living along it, who formed a road district and issued bonds. The United States "matched dollars" in this important construction of a vital line in the Central Highway, which is 465 miles long and which traverses 19 counties between the coast at Morehead City and the Smoky Mountain at the Tennessee line. Cary is a village in which the high school is specially notable, as it was the first rural high school established in North Carolina. It has 600 students, a number from other counties and some from South Carolina, and it has 150 boarding pupils in excellent and modern dormitories.

All along this fine road between Raleigh and Cary handsome houses are in course of erection. It passes the State Fair Grounds and the 3000 acre State Prison farm, occupied this year, and which was Camp Bragg during the recent war—the "tank camp" of the United States. There the State prison has sawmill, cotton gin, brick plant, shops for wood and iron work, and is preparing for the construction of a model prison, with reformatory attached, along plans specially made, and presented as a gift to the State by the Rockefeller Foundation.

It is the purpose to make it one of the finest prisons in the country. The farm is already in fine condition, though work on it by the convicts did not begin until last January.

The hydro-electric plant on Green River, in Polk county, three miles above Saluda, is completed. It is furnishing power for mills at Spartanburg, S. C., and will also supply Saluda. A flume several miles in length takes the water from the dam to the generating plant.

To Promote Development of Virginia's Highways.

Richmond, Va., August 10—[Special.]—With V. D. L. Robinson, the executive secretary, in charge of the office and directing the work of organization, permanent headquarters of the Virginia Good Roads Association have just been established in Murphy's Hotel. The association has before it one outstanding object—to see Virginia have "an adequate system of roads properly maintained."

President C. C. Vaughan, Jr., and Secretary D. B. Ryland of the association have just left Richmond after meeting Mr. Robinson and completing arrangements for the opening of the office. Mr. Robinson, for five years secretary of the Dixie Highway Association, reported for duty on August 1.

Industrial Research Translates Knowledge Into Dollars.—United States Forest Products Laboratory Celebrates Its Decennial.

Extensive conservation of our national wealth of wood through more efficient utilization was the keynote sounded throughout the decennial celebration at the Forest Products Laboratory at Madison, Wis., July 22-23. Over 200 visitors from all parts of the country were present, representing every line of wood-using industry, including 59 wood-using associations and companies, 18 lumber manufacturing associations and companies, the deans of 12 forestry schools, the United States Forest Service and other visitors and friends. They came to pay tribute to the laboratory's 10-year record of service to American industry.

The Forest Products Laboratory is a Government institution of industrial research in wood and all wood products maintained by the United States Forest Service in co-operation with the University of Wisconsin. In this work 220 engineers, wood technologists, manufacturing specialists and assistants are employed in developing new uses for wood and improving present manufacturing methods. Investigations and experiments are undertaken both independently and for individuals and companies on a co-operative basis. Results obtained are disseminated through co-operative reports, commercial demonstration, correspondence, Government bulletins, mimeographed circulars, articles in the trade press and practical instruction courses given at the laboratory.

RAILROADS

RAILROAD TO BE EXTENDED.

Immediate Rebuilding of a Louisiana Line and Plans to Make a Short Through Route.

Monroe, La., August 7—[Special.]—E. A. Frost, G. S. Prestidge and F. T. Whited, officials of the Frost-Johnson Lumber Co. of Shreveport, La., have closed their deal for the Arkansas & Louisiana Midland Railroad, 52 miles long, between Monroe and Crossett, Ark., for \$375,000 in the United States District Court, and they announce that a new corporation, to be known as the Arkansas, Louisiana and St. Louis Railway Co., is being organized and will be capitalized at \$1,000,000, of which \$600,000 will be paid in cash, for the purpose of rebuilding the line and operating it. They have associated with them five or six influential Louisiana lumber men, the La Del Oil Properties, Inc., and the United Oil & Gas Co. of Monroe, as well as representatives of the shipping interests of Monroe, Bastrop and other towns on the railroad. Monroe and Bastrop shipping interests have bought \$100,000 worth of stock in the company.

It is further stated that the ultimate purpose of the new company is to establish a through trunk line by a short route between St. Louis and New Orleans. Steps will be taken before January to bond the railroad company so as to take over the Ashley, Drew & Northern Railway, which runs between Crossett and Monticello, Ark. and which is owned by Crossett lumber interests associated in the purchase of the Arkansas & Louisiana Midland Railroad. This step, it is stated by Mr. Frost, will be followed by the extension of the Ashley, Drew & Northern line from Monticello to Pine Bluff, Ark., 40 miles, to connect with the Cotton Belt Railway. At the same time plans will also be taken to extend the Arkansas & Louisiana Midland from Monroe to connect with the Tremont & Gulf Railway by the construction of a 25-mile link.

The Arkansas & Louisiana Midland Railroad penetrates the heart of a very rich gas field in Northeastern Louisiana, where widespread developments are under way to discover oil. It also reaches into wealthy lumber regions of Louisiana and Arkansas.

New Equipment.

Tennessee Coal, Iron & Railroad Co. has ordered 4 switching locomotives—six-wheelers and of 84 tons weight—from the American Locomotive Co.

Birmingham Southern Railroad has ordered 2 consolidation locomotives of 100 tons from the American Locomotive Co.

Central of Georgia Railway will purchase 7 locomotives and about 800 freight cars at an approximate cost of \$2,500,000. The loan of \$815,000 recently allowed the road by the Government is to be used for part payment.

Uvalde & Northern Railway Co., C. Endsley, president, San Antonio, Tex., desires to purchase 3 locomotives (coal burners) weighing from 65 to 75 tons.

Western Maryland Railroad is reported in the market for 20 freight locomotives.

Atlantic Coast Line has, it is reported, ordered 400 coal cars of 50 tons capacity from the Standard Steel Car Co.

Missouri, Kansas & Texas Railroad is reported getting prices on 1500 gondola cars and 2000 automobile cars.

International & Great Northern Railroad is expected to soon buy 10 locomotives.

Wheeling & Lake Erie Railroad, according to a report from Wheeling, W. Va., will purchase 2000 gondola cars and 1000 box cars.

Sale of Interurban Property.

The Bryan-Central Texas Interurban Co.'s property is to be sold at auction at Bryan, Tex., according to a report from Houston, the sale to take place September 7 under a decree of the Federal Court, Guy Graham of Houston being appointed special master.

Demand for Locomotives.

President Andrew Fletcher of the American Locomotive Co., in a letter to the stockholders accompanying the semi-annual statement of June 30, says:

"There have been no very large orders for new locomotives placed in the United States since January 1, 1920, by the European countries undergoing reconstruction. Negotiations for substantial orders have been carried on for a number of months and are still in progress, but the general financial and internal conditions of some of the countries desiring locomotives, and the necessity of deferred credit payments, present problems which require cautious and conservative consideration, especially in view of the large demands on our working capital which are being made by railroads of the United States and which will no doubt be increased in the near future. * * *

"The tonnage production of the plants of the company averaged for the six months period but 35 per cent of their rated capacity, ranging from 23 per cent of capacity in January to 58 per cent in June. The production was necessarily small during the first few months of the period, due to the small amount of business on hand at the first of year, and as business increased the production was very materially affected by the great difficulty in obtaining materials of all kinds because of the most trying operating conditions of the railroads due to strike troubles and the poor condition and inadequate amount of their rolling stock.

"The gross business for the six months ended June 30, 1920, amounted to \$21,769,679, as compared with \$20,630,084 for the previous six months, an increase in gross business of \$1,139,595. The percentage of manufacturing profit to gross was 14.4, as compared with 15 for the preceding six months."

Fir Railroad Ties Bought by Eastern Lines.

The normal demand for railroad ties is between 100,000,000 and 125,000,000 annually, says the recent United States Forest Service report compiled in response to the Capper resolution in the Senate. This report says: "In 1918 purchases were slightly under 77,500,000, according to the report, and in 10 months of 1919 they were slightly over 84,500,000. During the war and the period of Government supervision of the railroads, extensions could not be made and improvements were necessarily confined to those of an urgent character. Lumber purchases were therefore at a minimum. Even under such a policy of retrenchment railroad purchases of sawed materials, excluding hewn railroad ties, telephone poles, etc., aggregated approximately 4,500,000,000 feet, or 14 per cent of the total lumber cut of the country for 1918.

"That there have been profound changes in the lumber distribution from different regions during the past year is shown by the invasion of the Middle Western and Eastern States by Douglas fir ties. These are regions which in the past have been supplied with the standard oak tie cut immediately along the rights of way, or with Southern pine ties from the South. During 1919 orders amounting to nearly 100,000,000 board feet were placed for Douglas fir trees for Eastern roads, because of the uncertainty of securing adequate supplies along their rights of way and because of the excessive costs of local ties. In other words, oak ties cut within a few miles of the right of way, and bearing practically no charge in freight, and Southern pine ties are now being replaced by fir ties hauled overland across the continent or shipped through the Panama Canal."

Southern Freight Traffic Heavy.

A report from Washington says that the records of the Commission on Car Service, to which reports are made by all the large railroads, show that "during the week ended July 16 there were loaded on the railways of the South 127,485 cars of commercial freight, an increase of 10,782 cars over the loading for the same week last year and an increase of 3981 cars over the same week in July, 1918, when every possible effort was being made to rush war material to France. During the three weeks ended July 16 the records of the commission show that there were loaded on the railways of the South 350,962 cars of commercial freight, as against 333,937 cars during the same period last year and 352,183 cars during the same period of 1918."

Secretary and Treasurer Elected.

Milton Harrison has been elected secretary and treasurer of the National Railway Service Corporation, which was incorporated July 29 in Baltimore by S. Davies Warfield, Chas. C. Homer, Jr., and W. M. Hayden for the purpose of supplying locomotives and cars to railroad companies under the auspices of the Interstate Commerce Commission. Mr. Harrison, who is also secretary of the National Conference of Mutual Savings Banks, was chosen for his new post at a meeting of the trustees of the National Railway Service Corporation held last Thursday in New York.

Yards at Canton, Md., to Be Enlarged.

The Pennsylvania Railroad Co. proposes to spend \$350,000 to enlarge its yard facilities at Canton, Baltimore, Md. About 35 per cent will be added to the storage capacity of the tracks, and the yard entrances to the new large grain elevator and the new coal pier will be completed. This will finish work that was contemplated before the beginning of the war.

New Officers Chosen.

W. Stephenson, formerly superintendent of the Pine Bluff division of the St. Louis Southwestern Railway, has been elected general manager of the Jonesboro, Lake City & Eastern Railroad.

J. B. Gavin, for some time in the Government Railroad Service at Washington, has been appointed traffic manager of the Alabama, Tennessee & Northern Railroad, Mobile, Ala.

TEXTILE

To Manufacture Cotton-Tire Fabrics.

Cotton products for tires will be manufactured by the Continental Tire & Fabric Co., Stamford, Tex., organized with S. M. Strange as president. This company proposes to build brick, concrete and steel structures costing \$600,000 and to install 15,000 spindles with accompanying machinery.

\$4,000,000 Mill Company Chartered.

Capitalized at \$4,000,000, the American Yarn & Processing Co. has been chartered to build a large plant for manufacturing and processing cotton yarns. The incorporators are C. E. Hutchinson and J. M. Springs, both of Mt. Holly, N. C., and J. L. Lowe of Charlotte.

Plans Cotton and Woolen Products Mill.

The manufacture of cotton and woolen products is planned by Joe E. Webb, Madisonville, Tex. It is proposed to build a mill, and correspondence is invited regarding plans and specifications for structures and mechanical equipment for manufacturing.

Textile Mill Notes.

A \$100,000 increase of capital is proposed by the Lockmore Cotton Mills, York, S. C.

An increase of capital from \$500,000 to \$3,000,000 is proposed by the Efrid Manufacturing Co., Albemarle, N. C.

The Glenwood Cotton Mills, Easley, S. C., will increase capital from \$600,000 to \$1,200,000.

An increase of capital to \$750,000 from \$250,000 has been announced for the Pickens (S. C.) Mills.

J. L. Stifel & Son, Wheeling, W. Va., manufacturers of indigo prints and drills, will build \$75,000 mill addition.

An enlargement to include finishing plant has been decided upon for the Calton Hosiery Mills of Spartanburg, S. C.

An increase of capital from \$100,000 to \$1,000,000 has been decided upon for the Delburg Cotton Mills Co., Davidson, N. C.

Thirty-seven corrugated iron warehouses will be erected along the Mexican border by the War Department, at a cost of \$1,122,000.

Commendations, Kicks and Comments

We Would Be Glad to Make It So.

F. C. GILMORE, Architect, Tallahassee, Fla.—Herewith please find my check for \$6.50 for one year's subscription to your—well, to the best publication in the world.

Opposes Manufacturers Record's Views on Prohibition as un-American.

PAUL J. TALBOT, Director of Sales American Mills Co., Atlanta, Ga. We did not answer your previous letter for the reason that we were not interested in advertising in the MANUFACTURERS RECORD, our principal reason being that we did not care to encourage the publication of this kind whose editorials are particularly on prohibition.

It is unfortunate that at this time when so much effort is being made to sacrifice personal liberty, trade publications, which have such wonderful opportunities for helping, should devote their pages to such un-American ideas as prohibition.

How One Doughboy Viewed the Armistice.

C. J. SHAW, West Philadelphia, Pa.—The writer wishes to take exception to a statement contained in your issue of July 29, in the article "World Danger in the Poland Situation."

You say "American troops, knowing that they had the Huns on the run, wept when they received word of the armistice." Literally, this is true, but let me inform you that the tears they shed were tears of joy and not of sorrow because the struggle had ended, and I dare say there was many a Doughboy, many a man in the Suicide Squads and other organizations who, with tears of joy in his eyes, thanked the Almighty that the hellish work was finished and he could soon return to his own free country, his family and friends.

The writer was connected with the Radio Corps and was on the front a little time himself. When negotiations for an armistice were under way we copied the various messages passing between the Berlin and Paris radio stations, and these messages were translated and passed on to the Doughboys and other outfits. When the contents of each message was passed around, I assure you, Mr. Editor, they did not weep, but on every hand one heard the expression, "It's too good to be true." And when 11 o'clock of that memorable day came and the guns died away until you could actually hear the blessed silence, and when peace seemed to float gently over the fields and settle down, I tell you, Mr. Editor, they DID weep and their hearts sang—for joy.

And on this side of the wide ocean, because they saw their stocks tumbling; heard their machinery cease its busy hum and saw their blood-stained profits dwindling, men said "Let them go on! Let them chase the Hun back into his own land and give him a taste of his own devilish medicine"—and keep the wheels of our mills turning and our profits pouring in.

Regardless of whether the Allies should have gone on to Berlin or whether they should have stopped when they did, the American Doughboy and all others who were in that Hell "Over There" were mighty glad when it was over and they could once more call themselves human beings.

The above is, perhaps, drawing out a small point pretty far, but I merely write in defence of the boys who were over there. They were not, as many people think, wild beasts or devils, but were ordinary human beings—Americans—with a desire for peace and happiness. With your broad knowledge of humankind, Mr. Editor, you should not be so easily deceived, and if anyone tells you that the Doughboys "wept for sorrow" because the war had ended, you'll know that man either don't know what he is talking about or else he's a plain, everyday liar.

The Hun may not be beaten, and, if necessary, I am willing to do my part to give him another thrashing. However, I think it is poor policy to slander the Doughboys, even though it be to arouse sentiment for a just cause.

Wants Laundry, Bakery and Ice-Cream Factory.

H. J. YOUNG, Beaufort Gazette, Beaufort, S. C.

I am writing for information which you no doubt can furnish. Beaufort is a town of 5000 people. We need a laundry, having only a small Chinese laundry at present; a bakery, having none now, and there is a very good opening for an ice-cream factory. A number of the leading men here are interested with me in the establishing of a business to take care of all three under one roof and one management.

Will you give us some idea as to plans, costs and details of the proposition? We would plan to do considerable out-of-town work in all three departments, as there is a considerable amount of territory that really belongs to us and is easily reached from here.

MECHANICAL

Steam Shovel Work on River Improvement.

Dayton and other cities in the Miami River Valley of Southwestern Ohio suffered great loss of life and property by the devastating flood of 1913. Before the waters had receded a committee of prominent men throughout the valley was organized to prevent any recurrence of the disaster. Due to their efforts State legislation was obtained, the Miami Conservancy District was formed and there is now a \$25,000,000 project being carried through under the supervision of Arthur E. Morgan, president of the Morgan Engineering Co., who has been its chief engineer since its organization, in 1915.

The basic purpose of this undertaking is control of the streams in the Miami Valley. It consists, briefly, of five huge earth and concrete dams, which, blocking the valleys of the five principal streams, form great retarding basins. Flood-waters, which are bound to result from heavy, early-spring rains falling on frozen ground, will be held in the retarding basins and only the normal stream volume will escape through the concrete outlet structures. The excavation and handling of a total of 14,000,000 cubic yards of earth and rock and the production of 200,000 yards of concrete are involved. Incidental operations include the relocation of all highways and railroads, both steam and electric, and the widening, deepening and straightening of the river channels through the towns below the dams.

The revolving steam shovel, made by the Marion Steam Shovel Co., Marion, O., shown in the accompanying picture, is engaged on this channel work, and its crawler trucks have made this type of shovel extremely valuable to the district engineers, who speak enthusiastically of its performance.

The earthwork of the five dams is being placed by hydraulic filling. Material is excavated from borrow pits by dragline excavators or by hydraulic giants. Pneumatic dump cars or gravity sluicing carry the aggregate to deep sumps, from which it is pumped by centrifugal dredge pumps. The material is discharged into settling pools through 15-inch pipe lines, and the speed with which the fill progresses is remarkable. A "Marion" dragline is busy leveeing the side of the hydraulic fill.

The importance of this flood-control project to the people and the industries in the Miami Valley cannot be overestimated. The farms and the thriving towns and cities, with their many industrial plants, are now securely protected against damage and destruction by flood. Capitalists support Miami Valley enterprises generously now that the flood hazard is removed and labor is free from apprehension. What has been done there to make life and property safe can be done elsewhere to remove flood dangers.

Textiles, Clothing, Underwear, Etc.

ALCIBIADE ORFANIDES, Smyrna, Turkey in Asia.—The goods and products imported in our country are numerous, especially now with the new happy state of things, and the trade will greatly improve. As general information, however, I must state the following lines of regular market demand: Textile goods, wearing apparel, underwear, hosiery, upper and sole leathers, edibles, hardware, safes, metals, chemicals, writing machines, automobiles, etc. For any good standing firm of automobiles and bent steel safes there is a very good placing now.

FOREIGN NEEDS

[The MANUFACTURERS RECORD receives many letters from abroad asking for information about American goods, and others, from men who wish to represent American houses. Without assuming any responsibility for these concerns, we publish a summary of the foreign letters of inquiry from week to week.]

Engineering, Electrical and Mechanical Agency Wanted.

K. B. SEN & SONS, No. J. 186, 7 43, Clive Row, Calcutta, India.—We are now open to invite engineering, electrical and mechanical representation in our territory, and we shall be glad to have the names of companies who are willing to appoint us as their selling agents in this country. We are also in a position to export Indian produce, and are willing to do direct business with some respectable American firms.



MODEL 21 MARION SHOVEL AT WORK ON MIAMI RIVER CHANNEL.

American Lard and Wine Casks Wanted.

BAMIERE-DUVAL, 11 Rue du Puits Sale, Saint Valery, France.—We would be pleased to act as representatives for a large barrel manufacturer and for a firm which exports American lard. We are in great need of oaken barrels for transporting wine and of the following specifications: Capacity, 600-650 liters; eight iron hoops; weight, 170 to 180 kilos; thickness of woods, 46 to 45 mm.; red oak.

Leather, Hats, Silks Goods, Paper, Oils.

MAXIME O. BUCCIANI, 73A, Rue Fonad 1 er, Alexandria, Egypt.—I do a strictly commission business and am desirous of making business connections with important factories in the United States which desire to export products to Egypt. The articles which interest me most are: Leather and skins for shoes; hats, silk goods, paper and envelopes, essential and synthetic oils for perfumes and cordials. To avoid loss of time it would be preferable if the firms who want to honor me with their confidence to send me at once their catalogs and price lists, conditions of sale and samples of articles, with discounts.

Electric Motors, Batteries, Etc.

THE COMMERCIAL ELECTRIC CO., Karachi, India.—We are interested in the following lines at present: Electric motors and dynamos, compact type, light in weight and small in size, as far as possible; electric novelties of all sorts, kerosene and gasoline engines, cycles, motors for cycles, motorcycles, motor cars, medium-priced, i. e., worth about \$1000; electric lamps and all accessories for motor cars and cycles, farm lighting plants, accumulators or storage batteries, accumulators for flashlights, wet cells (Edison type, for continuous work on lights and fans), friction dynamos for lights by bicycle wheel, telephones, bells, indicators, switchboards, etc., heating and cooking apparatus, etc. We are generally interested to work with actual manufacturers rather than with their distributors or representatives.

Construction Department

EXPLANATORY.

The MANUFACTURERS RECORD seeks to verify and obtain additional information regarding all enterprises reported in its Construction Department, by direct daily correspondence. Further facts of new value are published later from telegraph, mail and representatives' reports. We appreciate having our attention called to errors that may occur.

DAILY BULLETIN.

The Daily Bulletin of the MANUFACTURERS RECORD is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$20.00 per year.

Bridges, Culverts and Viaducts.

Ala., Huntsville.—Madison County Board of Revenue, C. H. Pulley, Prest.; construct bridge over Flint River on Hobbs Island; \$12,000; Austin Brothers Bridge Co., Contr., Atlanta, Ga. (Bids lately noted.)

Ga., Columbus.—City, J. B. Knight, Jr., Chrmn. Bridges and Wharves; erect bridge from Columbus to Girard, Ala.; concrete; \$200,000; Garrett & Slack, Engrs., Montgomery, Ala.

Ga., Dalton.—Whitfield County Comms. Roads and Revenues, H. J. Wood, Clerk; construct bridge across Bear Creek; bids until Aug. 13. (See Machinery Wanted—Bridge Construction.)

Ga., Newnan.—Coweta County, Comms. Roads and Revenues, T. G. Farmer, Jr., Clk.; construct 390 lin. ft. concrete bridges on Newnan-Griffin Rd.; Federal-aid Project 134; 85,000 lbs. reinforcing steel; bids until Aug. 19; H. G. Smith, Div. Engr., La Grange, Ga. (See Machinery Wanted—Bridge Construction.)

Md., Baltimore.—City; construct Windsor Mill road bridge over Gwynn's Falls and approaches; bids until Aug. 18; A. E. Christ-hill, Highways Engr. Lately noted to erect \$70,000 reinforced concrete bridge, Jno. E. Greiner & Co., Fidelity Bldg., being engineers. (See Machinery Wanted—Bridge Construction.)

Miss., Clarksdale.—Coahoma County Commissioners; construct bridges and roads; voted \$500,000 bonds. (Lately noted to vote.)

N. C., Tuxedo.—City; construct bridges over stream at Lake Summit; Contr., Atlantic Bridge Co., E. E. Hanks, representative, Charlotte, N. C.

Tex., Baird.—City; construct and improve bridges and streets; voted \$14,000 bonds. Address The Mayor.

Tex., Bonham.—Bonham Red River Bridge Co., Sld Smith, Secy.; construct highway bridge across Red River; four 185½-ft. steel spans; 18-ft. roadway; concrete and wood floors; reinforced concrete and steel cylinder piers; earth embankment approaches; bids until Aug. 23; Harrington, Howard & Ash, Consulting Engrs., Kansas City, Mo. (See Machinery Wanted—Bridge Construction.)

Tex., Fort Worth.—City, W. D. Davis, Mayor, and John Roberts, County Commr.; erect concrete bridge over Trinity River; \$50,000 to \$100,000; contemplated.

Va., Portsmouth.—Comsn. of Roads and Bridges, 414 New Kirn Bldg.; construct Western Branch bridge over Elizabeth River; bids until Aug. 16. (See Machinery Wanted—Bridge Construction.)

W. Va., Clarksburg.—Harrison County Commissioners, J. James Crews, Clk.; construct

10 bridges in Simpson, Tenmile and other districts; bids until Sept. 2. (See Machinery Wanted—Bridge Construction.)

W. Va., Spanishburg.—Mercer County Court, Lowery G. Bowling, Clk.; construct 40-ft. spna concrete girder bridge across Rich Creek; bids until Aug. 30; Elmer C. Barton, Engr., McNutt Bldg., Princeton, W. Va. (See Machinery Wanted—Bridge Construction.)

W. Va., Spencer.—Roane County Comms.; construct 75-ft. span concrete bridge; Hardman & Minns, Contrs.; \$112,684.30. (Lately noted to construct bridges.)

W. Va., Union.—Doddridge County Court, Hiram Hutson, Clk.; construct concrete bridge over McElroy Creek; 80-ft. span; 384 cu. yds. concrete; concrete slab bridge over Ragans Run; 20 ft.; 14-ft. way; 70 cu. yds. concrete; bids until Aug. 27. (See Machinery Wanted—Bridge Construction.)

W. Va., West Union.—Doddridge County Court, Hiram Hutson, Clerk; construct concrete bridge over McElroy Creek, near Eagle Mills; 80-ft. span; 384 cu. yds. concrete; bids until Aug. 19. (See Machinery Wanted—Bridge Construction.)

Canning and Packing Plants.

Fla., Clearwater.—Baskin Packing Co. Incptd.; capital \$25,000; J. A. Walsingham, Prest.; H. H. Baskin, Secy.-Treas.

Fla., Lakeland.—Southland Citrus Products Co.; increased capital to \$100,000.

Fla., Jacksonville.—King & Co., 530 E. Bay St.; improve building; \$25,000; erect 2-story and basement semi-mill construction plant addition; waterproof floors, paved with vitrified brick; construct 7 smokestacks and additional cooler-room; remodel office; Mellen C. Greevy and Roy A. Benjamin, Archts.; W. T. Hadlow, Contr.

Fla., Knights.—P. H. Varn; improve packing-house; erect addition; install mchy.

Fla., Lake Worth.—Lake Worth Fruit & Conserving Co., Dixie Highway, organized; capital \$50,000; D. P. Council, Prest.; R. L. Horsman, Secy.-Treas. (Lately noted incptd.)

N. C., Goldsboro.—Chamber of Commerce, W. C. Denmark, Secy.; interested in establishing cannery; install mchy. (See Machinery Wanted—Cannery Equipment.)

Clayworking Plants.

N. C., Fayetteville.—Bricks.—S. S. Dixon; contemplates establishing brick plant. (See Machinery Wanted—Brick Machinery.)

W. Va., Charleston.—Bricks.—Raleigh-Wyoming Coal Co., G. T. Harris, Treas.; plans installing shale-brick plant; daily capacity 30,000. (See Machinery Wanted—Brick Machinery.)

Coal Mines and Coke Ovens.

Ky., Ashland.—Ashland Coal & Fire Clay Co.; increased capital from \$1500 to \$20,000.

Ky., David.—Dudley Coal Co. organized; capital \$600,000; W. T. Dudley, Prest.; George P. Morrison, V.-P.-Treas.; John P. Gorman, Mgr.; develop 2300 acres.

Ky., Henderson.—Canoe Creek Coal Co. organized; Morgan McCormick, Alex Blair, Jr.

Ky., Middlesboro.—Price-Jellico Coal Co. incorporated; capital \$60,000; W. E. Price, A. C. Carr, W. O. Pollard.

Ky., Pineville.—Kentucky Collieries incptd.; capital \$300,000; T. C. Hughes, Joseph and Jas. M. Stewart.

Okla., Okmulgee.—Fretwell Coal Co.; increased capital from \$50,000 to \$125,000.

Va., Lynchburg.—Upper Banner Coal Corp., B. E. Williams, Secy.; increased capital from \$500,000 to \$800,000.

Va., Lynchburg.—Pinnacle Block Coal Co. incptd.; capital \$1,000,000; H. P. Adams, Prest.; A. W. Horton, Secy.

Va., Raven.—Excelsior Red Ash Coal Co. organized; capital \$25,000; George R. McCall, Prest.; R. J. Blankenship, V.-P.; A. W. Horton, Secy.-Treas.; R. D. Horton, Supt.; develop 700 acres; has daily output 100 tons.

W. Va., Buckhannon.—Iris Coal Co. incptd.; capital \$50,000; Frank E. Williams, Enoch H. M. Bellis.

W. Va., Charleston.—Indian Run Collieries Co. incptd.; capital \$1,000,000; W. E. Wright, T. Brooke Price, Duke W. Hill.

W. Va., Cirtsville.—Dixon Branch Coal Co. incptd.; capital \$25,000; A. C. Romine, G. C. Maynor, both Cirtsville; T. E. Romine, Charleston, W. Va.

W. Va., Fairmont.—Dixie Mining Co. organized; Harry and John A. Clark, Jr., Thomas Robey; develop 250 acres; daily output 60 tons, to be increased to 1000 tons.

W. Va., Fairmont.—Big Four Coal Co. incorporated capital \$25,000; Kenna Clark, Howard R. Stevens, Thomas F. Robey.

W. Va., Horse Creek.—J. M. Moore, Huntington, W. Va.; purchased coal land; develop; proposed daily output 1000 tons.

W. Va., Iaeger.—Willmore Coal Co. incptd.; capital \$50,000; J. O. McLean, Stewart Bethea, both Iaeger; Walter F. Patterson, Welch, W. Va.

W. Va., Mount Clare.—Dorsey W. Cork; purchased 80 acres coal land; develop.

W. Va., Monongalia County.—James A. Paisley, Cleveland, O.; leased 500 acres coal land; develop; lay railroad; reported.

W. Va., Piedmont.—Twin Mountain Coal Co. incptd.; capital \$50,000; Howard E., Edward J. and A. P. Gross.

W. Va., Silush.—Boone Block Mining Co., J. M. Moore, Prest., Loop Bldg., Huntington, W. Va.; develop 750 acres; proposed daily capacity 1000 tons; install mchy.

Concrete and Cement Plants.

Ala., Demopolis.—Portland Cement.—Gulf States Portland Cement Co.; reported to erect \$2,000,000 plant addition; daily capacity 2500

bbls., increasing cement output to 3500 bbls. (Previously noted.)

S. C., Charleston.—Portland Cement.—Carolina Portland Cement Co., Joseph S. Hannah, Secy., 1 Broad St.; increased capital to \$2,000,000.

Cotton Compresses and Gins.

Ark., McPhearson.—Sid Matthews; rebuild burned gin.

Miss., Richton. — Richton Gin & Mfg. Co. organized; W. M. Dorsett, Pres.; C. H. Stevens, Secy. Treas.; has \$25,000 fireproof building; install cotton gin; later grist and rice mills, ice plant, etc.; P. M. Brown, Archt.; J. C. Adams, Constr. Engr. (Lately noted inceptd., capital \$25,000.)

Miss., Water Valley.—F. M. Edwards; rebuild burned gin.

S. C., Mauldin.—Mauldin Gin Co. organized; C. C. White, R. E. Griffin, J. S. Cooper.

Tex., Chilton.—Planters' Gin Co. inceptd.; capital \$30,000; F. T. De Graffenried, J. B. Landrum, E. T. Wiggins.

Tex., Floydada.—Farmers' Gin Co. organized; C. E. Neil, Pres.; W. L. Boerner, Secy. Treas.; build gin. (Lately noted inceptd., capital \$20,000.)

Tex., Fort Worth.—Menka Compress Co. inceptd.; capital \$375,000; Toyotaro Yasui, T. D. and Zeno C. Ross; erect cotton compress.

Tex., Houston.—Shippers' Compress Co.; increased capital from \$400,000 to \$600,000.

Tex., Memphis. — Farmers' Union Gin Co. inceptd.; capital \$25,000; E. M. Ewen, J. N. Cadd, J. T. Bishop.

Tex., Paris. — Transcontinental Compress Co.; increased capital from \$250,000 to \$375,000.

Tex., Uhlend.—Uhlend Farmers' Gin Co. incorporated; capital \$25,000; R. H. Kretzmeier, C. F. Heidenreich, D. Wiegand.

Tex., Wellington.—Farmers' Gin Co. inceptd.; capital \$30,000; A. J. Bradley, C. N. McClaskey, B. F. Ford.

Drainage Systems.

Fla., Fort Myers.—Iona Drainage Dist.; construct drainage system; drain 33,000 acres; \$300,000 bonds. (Previously noted.)

Ga., Griffin. — Spalding County, Comms. Drainage Dist. No. 1, J. P. Durkee, Secy.; dredge Troublesome Creek; main ditch 6.6 mi.; 137,420 cu. yds. excavation; bids until Aug. 21; Cecil L. Fife, Engr., Fayetteville, Ga. (See Machinery Wanted—Drainage Construction.)

Ky., Clinton. — Hickman County Drainage Comms., H. M. Cresap, Pres.; construct drainage system in Brush Creek Dist., Hickman and Graves counties; main canal 48,200 ft. long; 3 laterals, 3300 ft. long; excavation 29,798 cu. yds.; 5 wooden bridges; bids until Aug. 20; J. A. Porter, Engr. Supersedes recent item under Hickman. (See Machinery Wanted—Drainage System.)

Electric Plants.

Ark., De Witt.—Arkansas Light and Power Co.; complete lighting system.

Ark., Beebe. — Beebe Light & Power Co. inceptd.; capital \$20,000; C. A. Miller, Tom Neely, F. A. Dove.

Fla., Marianna.—Robt. W. Parr, Mapleton, Ill.; install electric light system on 1000-acre plantation.

Ga., Payne City. — City, L. W. Greene, Mayor; purchase, improve and enlarge electric lighting system; vote Sept. 7 on \$1500 bonds.

La., Violet.—Violet Ice & Electric Co. organized; capital \$50,000; Eri Vaughn, Pres.;

Uri Vaughn, Secy. Treas.; install electric plant; 65 H. P. (Lately noted.)

N. C., Ayden.—Town, J. K. Quinerly, Clk.; install light and water systems; \$22,000 bonds.

N. C., Oak Ridge.—Oak Ridge Light & Power Co. organized; D. L. Donnell, Pres.; D. L. Nance, Secy. Treas.; Southern Power Co., Charlotte, N. C., to furnish power.

S. C., Anderson.—Flat Rock Light & Power Co. chartered; capital \$5000; W. L. Hayes, J. Wesley Brown, L. C. Keys.

S. C., Charleston.—Oceanic Power Co. organized; Wm. Gregersen, Wm. P. Thillingast.

Tex., Donna.—Donna Light, Ice & Power Co.; increased capital from \$10,300 to \$75,000.

W. Va., Blueville.—Parish Realty Co., Grafton, W. Va.; install electric-light and water systems; 35-acre residential development.

Fertilizer Factories.

Ala., Prichard.—Virginia-Carolina Chemical Co., Richmond, Va.; erect plant addition; contract let.

Miss., Gulfport.—Marine Fertilizer & Feed Co. inceptd.; capital \$50,000; E. C. Gay, P. W. Levine.

Flour, Feed and Meal Mills.

Md., Harney.—David Zentz; rebuild burned mill; loss \$8000.

Miss., Gulfport.—Marine Fertilizer & Feed Co. inceptd.; capital \$50,000; E. C. Gay, P. W. Levine.

Mo., St. Louis.—Tiemann Elevator Co., H. J. Tiemann; purchased 5-acre site; contemplates erection grain elevator and warehouses.

N. C., Havelock. — Beachaven Milling Co. inceptd.; capital \$25,000; J. Harper and W. A. Erwl, Jr., J. C. Colcough; all Durham, N. C.

Tex., El Paso.—Community Milling Co.; increased capital from \$25,000 to \$40,000.

Tex., Orange.—Orange Rice Mills; increased capital from \$100,000 to \$200,000.

Tex., Perryton.—Perryton Milling Co. organized; main office Lakemp, Okla.; P. O. Box 301, Perryton, Tex.; E. Y. Ogilvie, Pres.; Jack W. Ogilvie, Treas.; erect fireproof flour mill; install Midget Marvel mill and equipment; daily output 75 bbls. (Lately noted inceptd. under Lakemp, Okla., capital \$25,000.)

Tex., Waxahachie.—Stone-McKenna Milling Co. inceptd.; capital \$40,000; G. J. Stone, G. W. McKenna, R. W. Getsendaner.

Va., Dyke.—B. G. Snow; rebuild burned \$20,000 flour mill.

Foundry and Machine Plants.

Ark., Texarkana.—Iron.—S. R. McDonald; erect iron foundry; brick construction; install furances and mchys.

La., Lake Charles.—Repairing, etc.—Southland Metal Co. inceptd.; capital \$50,000; Dallas Gross, Pres.; Adolph Bischoff, V.-P.; Henry A. Reid, Secy. Treas.; has plant.

N. C., Greensboro.—Burning-In Machines, etc. Farrington & White, A. O. White, Mgr., 213 S. Elm St.; install foundry equipment; contemplated; mfrs. burning-in machines and automobile accessories.

S. C., Charleston — Iron. — McLaughlin Iron Works inceptd.; capital \$25,000; James J. McLaughlin, Pres.; John M. Maguire, Secy.; John F. McLaughlin, Treas.

Va., Roanoke.—Machine Shop, etc.—Salem Foundry & Machine Corp.; erect machine shop and foundry; \$30,000.

Gas and Oil Enterprises.

Fla., Bartow.—Booster Oil Co. inceptd.; capital \$50,000; J. W. Sample, Pres.; B. C. Wilson, Secy. Treas.

Ga., Augusta.—Motor Oil Co. inceptd.; capital \$10,000; F. B. Harmon, F. W. Neal, Chas. D. Carr.

Ky., Bowling Green — Refining. — Bowling Green Refining Co. organized; capital \$500,000; Chester R. Bunker, Fort Worth, Tex.; plans 1200-bbl.-daily-capacity crude-oil refinery.

Ky., Louisville. — Jeffersontown Oil Co. inceptd.; capital \$5000; M. W. Agee, J. E. Anderson, G. A. Simpson.

Ky., Murray.—Calloway Oil Co. inceptd.; capital \$100,000; Robt. Lee and Floy Connor, Jno. Thomas Richardson.

La., Shreveport.—Loggy-Bayou Oil Co. incorporated; capital \$50,000; J. I. Garraird, Pres.; B. A. Farrell, V.-P. and Gen. Mgr.; H. P. Stephens, Secy. Treas.

La., Shreveport.—Arkansas Invincible Oil Corp. chartered; capital \$2,000,000; E. R. Ratcliff, Pres.; H. M. Journee, Maxwell Stevenson.

Md., Baltimore.—Stafford Oil & Gas Co., 308 Marine Bank Bldg., inceptd.; capital \$200,000; Geo. I. Stafford, Geo. Browning, Wm. H. James.

Okla., Ponca City.—Wax Plant.—Empire Refineries; plans \$1,000,000 improvements; erect wax-plant addition; increase capacity to 100 tons; install distilling capacity to 3000 bbls.; increase storage capacity.

Okla., West Tulsa — Refinery. — Constantin Refining Co.; erect \$75,000 plant addition.

S. C., Darling.—Palmetto Gas & Improvement Co. inceptd.; capital \$50,000; C. L. Romey, Pres.; J. F. Cahill, Secy. Treas.

Tex., Breckenridge.—Virginia Drilling Co. organized; capital \$160,000; Gaines B. Turner, Pres.; H. L. Stine, V.-P.; C. W. Clarkson, Secy.

Tex., Dallas.—Everybody's Oil & Gas Co. inceptd.; capital \$18,000; R. B. Fox, Jr., A. I. Cammack, Ollie Clem.

Tex., Fort Stockton.—Polk Prospecting Co. inceptd.; capital \$150,000; B. B. Neal, W. E. Richey, J. W. Grant.

Tex., Fort Worth.—Argonaut Oil Co. inceptd.; capital \$10,000; H. M. Wood, S. W. Fisher, A. L. Billard.

Tex., Port Aransas.—San Antonio & Aransas Pass Ry., L. Andrews, Ch. Engr., San Antonio, Tex.; leased 3.27-acre tract for oil storage; erect two 55,000-gal. tanks to receive oil from ships; lay pipe lines to serve tanks.

Tex., San Antonio.—Frontier Oil Co., 1018 Central Trust Bldg., organized; Alexander Boynton, Pres. Engr.; lay 15,000 ft. 2, 2½ and 3-in. pipe line on lease. Lately noted inceptd., capital \$100,000. (See Machinery Wanted—Piping; Tubing.)

Tex., Vernon.—Murray Drilling Co. inceptd.; capital \$25,000; A. P. Peck, R. C. Russell.

W. Va., Chapmansville.—Boone Oil & Gas Co., Charleston, W. Va., inceptd.; capital \$100,000; A. M. Rogers, Ottawa, W. Va.; C. E. Rogers, Wallback, W. Va.; W. M. Peters, Charleston.

Hydro-Electric Plants.

Va., Snowden.—City of Bedford, Va., C. A. Moore, Treas. Clk.; construct dam; improve canal and power-house; \$10,420; Preston, Nance & Overstreet, Contr., Bedford; Wm. C. Witner & Co., Const. Engrs., Richmond, Va. (Bids lately noted.)

Ice and Cold-Storage Plants.

Fla., Fort Lauderdale.—Southern Utilities Co.; erect 100-ton-capacity ice-storage room; George Young, Contr.

La., Violet.—Violet Ice & Electric Co. organized; capital \$50,000; Evi Vaughn, Prest.; Frank Ritter, V.-P.; Uri Vaughn, Secy.-Treas.; erect mill-construction building; install 15 to 20-ton raw-water ice plant; crude-oil engine; daily capacity 15 tons. Lately noted. (See Machinery Wanted—Ice Plant.)

Md., Salisbury.—W. F. Messick; organize company; capital \$100,000; erect cold-storage plant; daily capacity 35 tons.

Miss., Richton.—Richton Gin & Mfg. Co. organized; W. M. Dorsett, Prest.; W. M. Chamblis, V.-P.; C. H. Stevens, Secy.-Treas.; install ice plant; contemplated. (See Cotton Compresses and Gins.)

Tex., Donna.—Donna Light, Ice & Power Co.; increased capital from \$10,300 to \$75,000.

Land Developments.

Fla., Clearwater.—City. Mayor Booth; build golf links; issued \$30,000 bonds.

Fla., Naples.—Naples Gulf Coast Land Co. inceptd.; capital \$50,000; E. W. Crayton, Prest.; E. T. Rugg, Treas.; L. W. Crayton, Secy.

Fla., Naples.—Naples Improvement Co. incorporated; capital \$400,000; Bruce Haldeman, Jno. Buchanan, J. S. Ralston.

Fla., Naples.—Naples Gulf Coast Land Co. inceptd.; capital \$50,000; E. W. Crayton, E. T. Rugg, J. S. Ralston.

Tex., Galveston.—Cahill Cemetery Assn. organized; Brewer W. Key, Prest.; E. T. McBride, Secy.-Treas.; raise grade and improve cemetery; build 4-ft. brick fence with reinforced concrete base; concrete curb around individual lots; concrete walks; total cost \$20,000 to \$25,000.

W. Va., Charleston.—Charleston Nursery & Seed Co. inceptd.; W. D. Payne, Peyton G. Jefferson, C. P. Miller.

W. Va., Martinsburg.—Rosemont Park Co. inceptd.; capital \$10,000; M. L. Dorn, Stuart W. Walker, D. H. Parsons.

W. Va., Martinsburg.—Swan Pond Orchard Co. inceptd.; capital \$50,000; E. L. Henshaw, C. G. Grove, Geo. M. Bowers, Jr.

Lumber Manufacturing.

Ala., Consul.—George H. Hopper Co. inceptd.; capital \$10,000; George H. Hopper.

Ark., Little Rock.—E. L. Bruce Lumber Co.; erect sawmill and other additions to main plant; purchased site.

Ky., Belcher.—Justice Lyons Lumber Co.; rebuild burned sawmills.

Ky., Frankfort.—Leland G. Banning Lumber Co.; improve plant; install engine; double mill's capacity.

Ky., Greenville.—Green-York Lumber Co. inceptd.; capital \$5,000; John F. and David L. Green, J. M. York.

Miss., Meridian.—Mississippi Hardwood Co. inceptd.; capital \$30,000; F. W. Williams, E. P. Bartels, both Meridian; V. M. Scanlan, Hattiesburg, Miss.

N. C., Sylva.—Blackwood Lumber Co., main office Roanoke, Va.; V. R. Rieley, Supt.; develop 150,000 acres; \$500,000 improvements; erect sawmills, lay 20 mi. railroad; construction by owner; Cox & Son, Engr. (Lately noted increased capital from \$200,000 to \$1,000,000.)

S. C., Landrum.—Acme Building Material Co. reorganized; J. H. Williams, V.-P.; J. O. Hall, Secy.-Treas.; T. D. Curtis, Supt.-Mgr.

Tex., Saratoga.—C. C. Crow Lumber Co. in-

corporated; capital \$20,000; K. J., R. E. and C. C. Crow.

Tex., Wiergate.—J. Bradfield Long Leaf Lumber Co. inceptd.; capital \$150,000; J. Bradfield, R. I. Gould, H. T. Wadley.

W. Va., Elkins.—Joyce Lumber Co. inceptd.; George A. Blackford, William L. Gilleland; both Wheeling, W. Va.; A. Tegarden, Martin's Ferry, O.

W. Va., Huntington.—Ritter Hardwood Lumber Co., 1111 First National Bank Bldg. (lately noted inceptd., capital \$300,000) organized; C. L. Ritter, Prest.; B. B. Burns, V.-P., Treas. and Mgr.; H. K. Eustler, Secy.; erect 9-ft. single-band mill; ordinary construction; install 9-ft. single-band mill with engine, cars and logging equipment; \$100,000. (See Machinery Wanted—Sawmill.)

W. Va., Raleigh County.—Board Lumber Co. inceptd.; capital \$250,000; P. T. Board, E. A. Simmons, W. E. R. Byrne, all Charleston, W. Va.

W. Va., White Sulphur Springs.—Greenbrier Lumber Co., main office, Charleston, W. Va., inceptd.; capital \$50,000; J. C. Myers, White Sulphur Springs; A. D. Broetzman, A. J. Peck, both Charleston.

Metal-Working Plants.

Ark., Hot Springs.—Tire Tools.—Economy Tire Tool Co. organized; A. W. Kinsolving, Prest., Little Rock, Ark.; W. A. Kinsolving, V.-P., Washington, D. C.; Floyd Huff, Secy.-Treas., Hot Springs; proposes to contract for mfg. tire tools. (Lately noted inceptd., capital \$15,000.)

La., Shreveport.—Solder, etc.—Shreveport Brass Works, R. J. Morton, Mgr.; erect 40x125-ft. plant to mfr. solder, white, type and bab-bitt metals; install \$65,000 equipment; daily capacity 100 tons; J. P. Mendenhall, Mgr.; new plant.

Md., Baltimore.—Metal Products, etc.—Powell Mfg. Co., Hanover and Wells Sts., organized; Paul R. Powell, Prest., Baltimore; George H. Powell, Secy.-Treas., Cynwyd, Pa.; install metal-working equipment; purchased. (Lately noted inceptd.)

S. C., Greenville.—Metal Signs.—Poole & Co. organized; office, 213 S. Main St.; J. B. Poole, Prest.; J. C. Matthews, V.-P.-Treas.; C. E. Prichette, Secy.; has plant to mfr. electric signs, etc. (Lately noted inceptd.; capital \$35,000.)

Tex., Fort Worth.—Mold.—Two Cure Retread Mold Co. inceptd.; capital \$20,000; Joe Cassay, J. F. Ryan, P. P. Bongio.

Va., Richmond.—Metals.—Gordon Metal Co., Howard Gordon, Secy.; increased capital from \$25,000 to \$100,000.

Mining.

Mo., Noel.—Lead, etc.—Harmon & St. Clair; develop 800 acres lead and zinc land; install mch. (See Machinery Wanted—Mining Machinery.)

Va., Chesterfield County.—S. Dabney Crenshaw, Richmond, Va.; purchased coal lands; reported planning developments.

Va., Chesterfield County.—Crosby Thompson, West Point, Va.; purchased coal lands; reported planning developments.

W. Va., Martinsburg.—Stone.—H. C. Brooks Co.; develop limestone quarry; crush stone for paving material.

Miscellaneous Construction.

Ark., Helena.—Wharves.—City; construct wharves on Mississippi riverfront. Address The Mayor.

Fla., Tampa.—Docks.—Denton-Shore Lumber

Co., Phillip Shore; improve 3,000,000-ft.-monthly-capacity export docks; secured additional 600 ft. frontage; probably duplicate 60,000-ft.-capacity resaw plant.

La., Baton Rouge—Levee.—State Executive Dept., John M. Parker, Governor; construct Gold Point Place Levee, Caddo Parish; contents 42,000 cu. yds.; Arnold Levee, Bossier Parish, contents 60,000 cu. yds.; bids until Aug. 17; Frank M. Kerr, Chief State Engr., 212 New Orleans Court Bldg., New Orleans.

La., New Orleans—Wharf.—Commrs. Port New Orleans, 200 New Orleans Court Bldg.; improve 1st St. Wharf; concrete floors; chain walls, paving, earth fill, etc.; 170,000 sq. ft.; \$200,000; force account; equipment purchased; Arsene Perrilliat, Ch. Engr. (Super-sedes recent item.)

S. C., Charleston—Boiler Plant.—Navy Dept., Bureau Yards and Docks, Washington, D. C.; improve boiler plant at Navy-yard; Spec. No. 4252; bids until Aug. 25. (See Machinery Wanted—Boiler Plant.)

Tex., Eastland—Dams, etc.—Lake Eastland Corp. chartered; capital \$205,000; H. P. Brelford, C. U. Connelley, Cyrus B. Frost; construct dams, lakes and reservoirs.

Tex., Santa Maria.—Canal.—Santa Maria Water Improvement Dist. No. 4, Cameron County; complete improvements on canal system; voted \$45,000 additional bonds.

Va., Norfolk—Wharf.—Hastings Wharf & Terminal Corp. chartered; capital \$100,000; G. T. Hastings, Prest.; W. B. Hastings, Secy.

Miscellaneous Enterprises.

Fla., Clearwater.—Printing.—Sun Printing Co. inceptd.; capital \$60,000; D. O. Batchelor, Prest.-Treas.; L. L. Lucas, Secy.

Fla., Daytona.—Transfer.—Daytona Transfer Co. inceptd.; capital \$10,000; Henry B. Ross, Prest.; M. W. Ross, Secy.; Chester H. Wilson, Treas.

Ky., Louisville.—Electrical Supplies.—Electric Specialty Co. inceptd.; capital \$500; George R. Evans, J. L. Reighart, Walter B. Dickes.

Md., Baltimore.—Engineering, etc.—Flotation Corp., Equitable Bldg., inceptd.; Percy L. Pettigrew, Jos. W. Goodwin, Charles F. Smith.

Md., Baltimore.—Steamship Line.—Lone Star Oil Transport Co., Calvert Bldg., inceptd.; capital \$500,000; James L. Watson, Ferdinand H. Butenorn, Thos. E. Halle; operate steamships, barges, etc.

Md., Baltimore.—Farm Equipment.—American Acme Agricultural Accessories Co., 3023 Abell Ave., organized; Geo. R. Sinnickson, Prest.; Chas. J. Ziegler, V.-P. and Gen. Mgr.; Wm. H. Eisenhart, Secy.-Treas.; dealers in farm equipment; later will build or lease warehouse. (Lately noted inceptd. under Foundry and Machine Plants, capital \$50,000.)

Miss., New Albany.—Construction.—Union County Construction Co. inceptd.; capital \$25,000; R. L. Smallwood, J. B. Shannon.

N. C., Charlotte.—Laundry.—Union Laundry Co. organized; E. R. Faires, Prest.; G. W. Hunter, V.-P.; W. M. Sullivan, Secy.-Treas.; erect 50x120-ft. building. (Lately noted incorporated, capital \$125,000.)

N. C., Winston-Salem.—Pressing and Cleaning—Hopkins Co. inceptd.; capital \$10,000; C. H. Jones.

Okl., Tulsa.—Milk Depot.—Tulsa County Farmers' Co-operative Assn., Lewis A. Cline, Prest.; erect \$20,000 building.

S. C., Aiken.—Laundry.—Highland Park Hotel; establish steam laundry.

S. C., Beaufort.—Laundry, etc.—H. J. Young; establish laundry, bakery and ice-cream factory. (See Machinery Wanted—Laundry

Equipment; Bakery Equipment; Ice-cream Equipment.)

S. C., Charleston — Publishing. — Carolina Farmer & Stockman Publishing Co. inceptd.; capital \$75,000; S. L. Reid, Prest.; I. S. Hutto, Secy.; H. L. Thomas, Jr., Treas.

S. C., Duncan — Potato Curing. — J. W. Gaston; erect potato-curing house; capacity 1200 bu.; construction under supervision Ernest Cares, County Farm Demonstration Agent, and A. E. Schilleter, Clemson College Horticulturist.

S. C., Greenville — Fire Equipment. — City; install fire or pumping engines and equipment; erect fire department building; voted \$50,000 bonds. Address The Mayor. (Lately noted to vote.)

Tex., Dallas — Dairies. — Tennessee Dairies; increased capital from \$10,000 to \$50,000.

Tex., Houston — Engraving. — Star Engraving Co.; increased capital from \$15,000 to \$25,000.

Tex., Houston — Laundry and Cleaning. — Ineeda Laundry & Cleaning Co.; increased capital from \$50,000 to \$100,000.

Tex., Weatherford — Hardware. — Brown-Milburn Hardware Co. inceptd.; capital \$30,000; Jordan R. Brown, N. T. Tate, F. W. Milburn.

Va., New Castle — Mineral Water. — Virginia Mineral Springs Co., R. L. Sizer, Secy.; increased capital from \$50,000 to \$250,000.

Va., Norfolk — Engraving and Electrotyping. Photo-Engraving & Electrotyping Block Co. inceptd.; Howard McGuire, Prest.; M. Glennen, Secy.

Va., Richmond — Construction. — Plant Construction Corp. chartered; capital \$50,000; Cyrus W. Beale, Prest.; Guy B. Hazelgrove, Secy.

Va., Richmond — Dairy. — Richmond Dairy Co., N. O. Scott, Secy.; increased capital from \$50,000 to \$750,000.

W. Va., Clarksburg — Contracting. — A. C. Shrum Co. inceptd.; capital \$25,000; Andrew L., Clyde M. and Annie L. Shrum.

W. Va., Fairmont — Delivery Service. — Fairmont Delivery Service Co. inceptd.; capital \$10,000; Charles W. McDonald, C. W. Fleming, C. L. Zundell.

W. Va., Huntington — Incinerator. — City Commissioners; install additional incinerator; daily capacity 15 to 20 tons; \$10,000; Nye Odorless Crematory Co., Contr., Macon, Ga.

Miscellaneous Factories.

Ala., Dothan — Candy. — J. N. Blaum Mfg. Co. organized; J. N. Blaum, Dothan; R. B. Clifford, Huntington, W. Va.; establish candy plant; mchy. purchased.

Ark., Fort Smith — Glass. — Harding Glass Co.; rebuild burned plant; loss \$200,000.

Ark., Little Rock — Work Clothes. — Miller Mfg. Co., 114 E. Markham St.; install additional mchy.; proposed weekly output 2000 doz. prs. overalls, shirts, trousers.

Fla., Tampa — Soap, etc. — Royal Palm Soap & Chemical Co., Petteway Bldg., organized; J. I. Bloom, Gen. Mgr.; succeeds Royal Palm Soap Co.; rebuild burned plant.

Ky., Henderson — Alcohol. — Geo. L. Lawden, Wm. Lucken; both Cincinnati, O.; purchased Kraver distillery; remodel and equip to produce alcohol.

Ky., Lancaster — Oilier. — Adjustable Sight Feeding Oilier Co. inceptd.; capital \$50,000; Wm. McCoy, G. M. Patterson, R. A. Crumrin.

Ky., Lexington — Drugs, etc. — Elks Mfg. Co., T. L. Gorman, Prest., Jellico, Tenn.; establish branch plant; mfre. drugs, spices and extracts.

Ky., Louisville — Vermin Destroyer. — Vermin Destroyer Co. inceptd.; capital \$2500; Henry, M. B. and Evelyn Showers.

Ky., Louisville — Tobacco. — Ben Poll Co. incorporated; capital \$20,000; Ben Poll, Denis J. Hines, Albert Stebler.

Ky., Louisville — Cigarettes. — Virginia-Kentucky Cigarette Co. inceptd.; capital \$25,000; C. Dunkerson, J. M. Phillips, B. S. Washer.

Ky., Owensboro — Milk, etc. — Evansville Pure Milk Co., J. T. Matthews, Mgr., Evansville, Ind.; establish ice-cream plant and dairy; ordered mchy.; capacity 1500 to 2000 gals. ice-cream and 500 to 600 gals. milk.

La., Swartz — Carbon Plant, etc. — Monroe Louisiana Carbon Co.; purchased 80-acre tract; erect carbon and gasoline extraction plants; build 25 burning houses; later increase to 100 and erect additional gasoline extraction plant.

Md., Baltimore — Uniforms. — American Apparel Corp., 128 N. Eutaw St., inceptd.; capital \$50,000; Harry Schwartzman, Hyman Gruskin, Maxwell D. Kramer.

Md., Baltimore — Bakery. — People's Bakeries, 106 N. Charles St., organized; capital \$100,000; Wm. B. Staley, Prest.-Mgr.; J. A. Hoffman, Jr., Secy.-Treas.; leased buildings and installed \$16,000 mchy.; later add \$10,000 mchy.

Mo., Kansas City — Remedy. — Douglas Stock Remedy Co. inceptd.; capital \$100,000; Jno. T. Walter, B. and D. M. R. Douglas.

Mo., St. Louis — Candy. — Joseph Murphy Sons Candy Co.; leased 4-story factory building; improve.

N. C., Brevard — Tannery. — Brevard Tanning Co.; remodel and improve plant in Pisgah Forest; \$50,000; J. E. Joyner, Contr.

Okla., Tulsa — Lubricating. — Wenger-Armstrong Lubricating Co. inceptd.; capital \$100,000; C. G. Armstrong, A. T. Smith, W. C. Wray.

S. C., Beaufort — Bakery, etc. — H. J. Young; establish bakery, laundry and ice-cream factory. (See Machinery Wanted—Bakery Equipment; Laundry Equipment; Ice-cream Equipment.)

S. C., Shelton — Bottling. — Shivar Springs Co.; rebuild burned plant.

Tenn., Memphis — Bags. — Bosworth Bag Co.; increase capital from \$250,000 to \$1,000,000.

Tenn., Nashville — Sorghum Mill. — C. C. Davis, Box 291, Hopewell, Va.; install sorghum mill on farm between Memphis and Nashville, Tenn.; mfre. molasses. (See Machinery Wanted—Sorghum Mill.)

Tex., Dallas — Batteries. — Southwestern Battery Co., 1707 Jackson St., organized; Albert Kramer, Prest.; F. B. von der Hoya, Secy.-Treas.-Mgr.; erect 125x50-ft. fireproof building; \$18,000; bids until Oct. 1; install 150-amp., 107-volt motor generator set; daily output 100 storage batteries; J. M. Lee, Archt.-Contr. Lately noted inceptd., capital \$20,000. (See Machinery Wanted—Generator Set.)

Tex., Galveston — Creamery. — Galveston District Dairymen's Assn., Geo. D. Collins, Houston, Tex.; reported to establish creamery.

Tex., San Antonio — Chili Powder. — Gebhart Chili Powder Co., G. G. Geyer, Mgr.; erect building; 2 stories and basement; 90,000 sq. ft. floor space.

Va., Basic — Cider, etc. — National Fruit Produce Co., Washington, D. C.; acquired 5-acre tract Co., Woodward Bldg., Washington, D. C.; acquired 5-acre site; erect plant to mfre. cider, vinegar, canned apples, etc.; capacity 25,000 bbls. vinegar and 100,000 cases canned apples.

Va., Norfolk — Corrugated Paper. — Corrugated Paper Co.; increased capital from \$100,000 to \$200,000.

Va., Roanoke — Laboratory. — Victory Laboratory inceptd.; capital \$100,000; L. B. Marlon, Prest.; Carleton Penn, Secy.

Va., Sistersville — Gearing Devices. — Benjamin F. Webb, Andrew J. Karl; interested in plan to organize \$2,500,000 company; mfre. gearing device for automobiles.

Va., St. Paul — Soap. — Virginian Soap Corp. chartered; capital \$500,000; D. D. Cox, Prest., Castlewood, Va.; W. M. Rose, Secy., St. Paul; W. E. Rasnick, Clintwood, Va.

Motor Cars, Garages, Tires, Etc.

Ala., Anniston — Filling Station. — Wofford Oil Co.; erect \$8000 filling station; E. W. Garrison, in charge construction.

Ark., Pine Bluff — Automobiles. — S. R. Thomas Motor Co. inceptd.; capital \$50,000; S. R. Thomas, Prest., Little Rock; G. C. Hammoms, Secy.-Treas., Pine Bluff; continues existing company.

Fla., Jacksonville — Garages, etc. — O. P. Woodcock; erect garage and shop; \$20,000.

Fla., Jacksonville — Automobiles, Trucks, etc. American Motors Export Co. (lately noted inceptd., capital \$5,000,000) organized; J. R. Pratt, Prest., Jacksonville; Frank T. Kelsacker, 19 Magnolia Ave., Daytona, Fla.; and George T. Mason of Jacksonville, V.-Ps.; J. William Johnson, Secy.-Treas.; Charles F. Kenney, Asst. Secy. and Treas., both of Jacksonville; distributors and exporters of automobiles, trucks, etc.; arranged with Wharton Motor Company, Thomas P. Wharton, president, 914 Main street, Dallas, Texas, to build \$2,500,000 plant in Jacksonville, to include \$650,000 fireproof buildings; open construction bids about Mch. 1, 1921; American company contracted for output of Jacksonville plant, with distribution rights for various States and countries; Wharton Motors Co. lately noted to build automobile works in Dallas, initial buildings and equipment to cost \$400,000; ultimate expenditure, \$2,500,000. Understood this plant will mfre. tractors exclusively. (See Machinery Wanted—Building Materials; Electrical Equipment.)

Ga., Athens — Automobile Manufacturing. — Red Diamond Motors, W. H. Seabrook, Prest., Atlanta National Bank Bldg., Atlanta, Ga.; contemplates building automobile works.

Md., Baltimore — Garage. — Salisbury Buick Co.; erect garage; contemplated.

Md., Baltimore — Gasoline Service Station. — Geo. R. Callis, Jr., 611 American Bldg.; erect \$25,000 gasoline service station at Frederick Ave. and Pratt St.; 97x46 ft.; wood and stucco; Spanish tile roofing; concrete floors; steam heat; electric lighting and signs; plans by owner; bids in about 2 weeks.

Miss., Oxford — Automobiles. — Stroud & Co. inceptd.; capital \$5000; M. L. Stroud, J. A. Coffey, C. B. Lynch.

N. C., Dallas — Automobiles. — Dallas Machine & Automobile Co. inceptd.; capital \$50,000; A. R. Holland.

N. C., Snow Hill — Automobiles. — S. J. Joyner Automobile Co. inceptd.; capital \$100,000; S. J. Joyner, Z. V. Barrow, C. M. Mendenhall.

Okla., Muskogee — Automobiles. — Apathy-Thompson Motor Co. inceptd.; capital \$25,000; O. R. Apathy, R. W. Thompson, R. T. Price.

Tex., Center — Motors. — Smith Motor Co. inceptd.; capital \$50,000; T. T. Smith, W. I. Davis, W. I. Powell.

Tex., Dallas — Garage. — American Automotive School, 4017 Main St.; erect 1-story frame garage and workshop.

Tex., Dallas — Automobiles. — Nash-McLarty Motor Co. inceptd.; capital \$125,000; F. E. McLarty, Prest. and Gen. Mgr., D. F. Anderson, Secy.-Treas.; consolidates McLarty Motor Co. and Brown Auto Co.

Tex., El Paso — Garage. — Tri-State Grocery; erect 120x48½-ft. brick; truss roof;

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

concrete flooring; Jos. G. Klapper, Archt.; Kern Place Improvement Co., Contr.

Tex., Houston—Garage.—W. B. Taylor, Walker Ave.; erect garage; \$8000.

Tex., Houston—Automobile Manufacturing.—Southern Motor Mfg. Assn.; erect 2 additional buildings to plant on Houston ship channel; saw-tooth steel construction; 121x480-ft. structure for passenger car mfr.; 75x150-ft. warehouse.

Tex., San Antonio—Automobiles.—Shepperson Automobile Co. inctpd.; \$25,000; J. G. Shepperson, R. C. Ferguson, Tom Cody.

Tex., San Antonio—Automobiles.—Burton Roundtree Co., 407 Ave. C; will occupy 80x145-ft. fireproof building; concrete, brick and hollow tile construction; to be erected by E. Sweeney.

Tex., San Antonio—Garage.—Citadel Battery & Garage Co., 222 E. Travis St., organized; A. S. Braham, Prest.; W. C. Church, Secy.; A. Rheiner, Mgr.; erect 3-story 118x200-ft. fireproof building; brick; reinforced concrete; install vulcanizing equipment and storage-battery plant. (Lately noted inctpd., capital \$6000.)

W. Va., Wheeling—Garage.—Saml. Broverman; erect \$17,000 garage.

W. Va., Wheeling—Garage.—J. W. Beltz & Sons Co.; erect \$8500 garage.

Railway Shops, Terminals, Roundhouses, Etc.

Okl., Oklahoma City.—Missouri, Kansas & Texas Ry., F. H. Ringer, Chief Engr., St. Louis, Mo.; plans to expend \$650,000 for improvements; include 8-stall roundhouse, shops, power turntable, mechanical coaling station, etc.

S. C., Laurens.—Charleston & Western Carolina Ry., A. W. Anderson, Gen. Mgr., Augusta, Ga.; rebuild coal chutes.

Tex., Dublin.—Wichita Falls, Ranger & Fort Worth R. R., H. F. McFarland, Chief Engr., Ranger, Tex.; erect roundhouse and shops.

Tex., Fort Worth.—Northern Texas Traction Co.; erect \$60,000 machine shop; reinforced concrete and brick.

Tex., Marshall.—Texas & Pacific Ry., E. F. Mitchell, Ch. Engr., Dallas, Tex.; erect pattern shop and office; 3 stories; 61x31 ft.; brick, steel and concrete; \$25,000 to \$30,000; Mayfield Building & Improvement Co., Contr., Cisco, Tex. (Lately noted to erect \$50,000 building.)

Road and Street Construction.

Ala., Bessemer.—City; pave First, Second and Fourth Aves and 19th St.; construct storm sewers; \$269,566; J. S. Morgan Paving Co., Paving Contr.; Sullivan, Long & Hagerty, Contrs. for curbing, grading and sewers.

Ala., Selma.—State Highway Comsn. of Ala., Montgomery, Ala.; construct 3.2 mi. road in Dallas County from Brown's Station to Perry County line; 12,672 cu. yds. excavation; bids until Aug. 31; W. S. Keller, State Highway Engr. (See Machinery Wanted—Road Construction.)

Ark., Mena.—City; pave streets; \$22,000; Early & Jones, Contrs., Sheridan, Ark.

Ark., Sheridan.—Grant County Improvement Dist. No. 9; construct 13.4-mi. gravel road from Sheridan to Redfield; \$60,000 or \$70,000; Guest Engineering Co., Engr., Pine Bluff, Ark. (Lately noted construct road.)

Fla., Bartow.—Polk County Commrs.; construct roads; issued \$60,000 bonds.

Fla., Miami Beach.—City; let contracts for 4 mi. paving; 1½ mi. Alton Road with Kentucky rock asphalt; width 35 ft.; require

1800 tons asphalt; Miami Ave. with macadam and oiled; will issue \$172,000 bonds. Address City Clk.

Fla., Miami Beach.—Miami Beach Improvement Co.; pave Pine Tree Drive; 2 mi.; rock, with oiled surface; Freedlund Construction Co., Contr., Miami, Fla. (Lately noted pave drive.)

Fla., Okeechobee.—City, W. W. Duncicliiff, Clk.; hard-surface 10 mi. streets; W. B. Clay, City Engr.; contract let. (Lately noted bids until July 19.)

Ky., Ashland.—City, W. A. Manning, Clk.; pave Montgomery St. from 25th to 26th, and Bath from 16th to 17th; Hunter & Forbes, Contrs.

Ky., Ashland.—City, W. A. Manning, Clk.; pave and curb Winchester Ave.; bids until Aug. 16; changed from July 5. Lately noted. (See Machinery Wanted—Road Construction.)

Ky., Nicholasville.—Jessamine County Commissioners; surface 25 mi. turnpike with tarvia; Barrett Co., Contr.

La., Alexandria.—Highway Dept., State Engineers, 332 Maison Blanche Annex Bldg., New Orleans; construct 7.28 mi. Alexandria-Coffax Highway, Rapides Parish; bids until Aug. 30; Duncan Bule, State Highway Engr. (See Machinery Wanted—Road Construction.)

La., Leocompte.—Town, W. H. Jones, Mayor Pro Tem.; construct combined curbing and gutter on Wall St.; pave sidewalks with concrete on St. Charles, Ford and Bank Sts. and Rapides Ave.; bids until Aug. 17. (See Machinery Wanted—Paving.)

La., Vidalia.—Concordia Parish Police Jury; construct 12 mi. Vidalia-Deer Park Highway; bids until Sept. 4. (See Machinery Wanted—Road Construction.)

La., Vidalia.—Concordia Parish Police Jury; construct 18 mi. Ferriday-Jonesville Highway west to Parish line; bids until Sept. 4. (See Machinery Wanted—Road Construction.)

Md., Baltimore.—City; repair roads at Loch Raven; bids until Aug. 18; Wm. A. Megraw, Water Engr. (See Machinery Wanted—Road Construction.)

Md., Baltimore.—City; pave sections of Lauretta, Wheeler, Warwick and other avenues; Contract No. 178; 10,000 sq. yds. sheet asphalt, 3000 lin. ft. armored concrete curb, 350 sq. yds. vitrified brick gutters, 1500 lin. ft. combination curb and gutter and 3800 cu. yds. grading; bids until Aug. 18; John H. Robinson, Prest. Commrs. for Opening Streets. (See Machinery Wanted—Paving.)

Md., Baltimore.—State Roads Comsn., 601 Garrett Bldg.; pave .11 mi. Cathedral St., Madison Ave. to Peabody Alley; \$13,246.50; Baltimore Asphalt Block & Tile Co., 1329 N. Monroe St. (Lately noted inviting bids.)

Md., Belair.—State Roads Comsn., 601 Garrett Bldg., Baltimore; construct section road through Belair, Harford County; \$16,380; American Paving & Contracting Co., Montebello, Baltimore.

Md., Cambridge.—Dorchester County Commissioners; improve roads, bridges and schools; plans vote in Nov. on \$350,000 bonds.

Md., Cambridge.—State Road Comsn., 601 Garrett Bldg., Baltimore; construct section road through Hurlock, \$15,656.60; section through Hurlock, \$11,902.30; Peninsula Construction Co., Contr., Berlin, Md. (Bids lately noted.)

Md., Salisbury.—State Roads Comsn., 601 Garrett Bldg., Baltimore; construct section road through Sharptown, Wicomico County; \$18,035.30; Peninsula Construction Co., Contr., Berlin, Md. (Bids lately noted.)

Miss., Clarksburg.—Coahoma County Commissioners; construct roads; voted \$500,000 bonds. (Lately noted to vote.)

Miss., Clarksdale.—Coahoma County Commissioners; construct roads; voted \$500,000 bonds.

Miss., Clarksdale.—Coahoma County Commissioners; construct roads and bridges; voted \$500,000 bonds. (Lately noted to note.)

Miss., Corinth.—Alcorn County Highway Comsn.; construct ¾ mi. Federal-aid Project No. 31; \$47,100; M. R. Striplin and C. E. Nichols, Contrs.; Xavier Kramer, State Highway Engr., Jackson, Miss. (Bids lately noted.)

Miss., Gulfport.—Harrison County Commrs.; construct roads in Beat No. 3; voted \$100,000 bonds.

Miss., Moss Point.—City, Geo. W. O'Neill, Mayor; pave Main St.; issue \$10,000 bonds.

Miss., Vicksburg.—City, Mayor Hayes; votes Sept. 21 on \$400,000 bonds to pave streets and \$109,000 bonds to pave river landing. (Lately noted to pave 50 blocks.)

Mo., Bollivar.—Polk County Commrs.; construct 13 mi. roads; \$72,431.98; construction by Springfield Special Road Dist.

Mo., Kansas City.—Board Public Works; pave Westport Ave. from Pennsylvania Ave. to Mill Creek; asphalt construction; Gray Paving & Material Co., lowest bidder.

Mo., Kirksville.—Adair County Commrs.; improve roads, including highway from Norvinger to Danforth; \$60,000.

N. C., Ashboro.—State Highway Comsn., Div. Office, Greensboro, N. C.; construct 10.04 mi. highway; 26,310 cu. yds. topsoil surfacing; 54,900 cu. yds. excavation; 2204 lin. ft. terra-cotta pipe; 51,500 lbs. reinforcing steel and 495 cu. yds. concrete in bridges and culverts; bids until Aug. 25; W. S. Fallis, State Highway Engr., Raleigh. (See Machinery Wanted—Road Construction.)

N. C., Carthage.—State Highway Comsn., Division Office, Greensboro, N. C.; construct 20.53 mi. highway in Moore County; 53,800 cu. yds. topsoil surfacing; 3742 lin. ft. 15-24-in. corrugated iron pipe; 97,570 cu. yds. excavation; bids until Aug. 25. W. S. Fallis, State Highway Engr., Raleigh. (See Machinery Wanted—Road Construction.)

N. C., Charlotte.—City; construct \$6000 sq. yds. asphalt paving on Salisbury Rd.; Simmons Construction Corp., Contr.

N. C., Council.—Bladen County Commrs., W. H. Grimsley, Chrmn.; construct 12 mi. sand-clay road; bids until Aug. 16; W. H. Banck, Engr., Wilmington, N. C. (See Machinery Wanted—Road Construction.)

N. C., Dobson.—Surry County Commrs.; construct 6 mi. hard surface graded road from State road by Mountain Park to Kapp's Mills; J. P. Dicus, Contr.

N. C., Lexington.—J. T. Hedrick, Mayor; improve streets; issued \$25,000 bonds.

N. C., Lexington.—State Highway Comsn., Div. Office, Greensboro, N. C.; construct 4.54 mi. highway in Davidson County; 11,870 cu. yds. topsoil surfacing; 29,400 cu. yds. excavation; 824 lin. ft. 12-24-in. terra-cotta pipe; 85,600 lbs. reinforcing steel and 600 cu. yds. concrete for bridges and culverts; bids until Aug. 25; W. S. Fallis, State Highway Engr., Raleigh. (See Machinery Wanted—Road Construction.)

N. C., Sparta.—State Highway Comsn., Div. Office, Greensboro; construct 5 mi. highway in Alleghany County; 34,730 sq. yds. water-bound macadam; 49,530 cu. yds. excavation; 1330 lin. ft. 15 to 18-in. corrugated iron pipe; bids until Aug. 25; W. S. Fallis, State Highway Engr., Raleigh. (See Machinery Wanted—Road Construction.)

N. C., Wilson.—Town, D. H. Hill, Mayor; improve streets; extend water and sewer sys-

tems; lay 75,000 sq. yds. asphaltic, sheet asphalt, bitulithic or Topeka pavements; 75,000 sq. yds. 5-in. concrete base; 17,000 cu. yds. excavation; 46,500 lin. ft. concrete curb and gutter; bids until Sept. 1; Gladding, Morrison & Ott, Engrs. (See Machinery Wanted—Paving.)

Okl., Oklahoma City.—State Board of Public Affairs, Geo. F. Clark, Chrmn.; improve streets on Lincoln Ave. and Capitol Sq.; bids opened Aug. 4; plans by Geo. H. Kessler; construction under supervision E. T. Colt, Engr. for State Board Public Affairs.

S. C., Florence.—Florence County Highway Comsn.; construct 125 mi. road; vote Aug. 31 on \$450,000 bonds.

S. C., Greenville.—City; improve streets and sidewalks; voted \$100,000 bonds. Address The Mayor. (Lately noted to vote.)

S. C., Kingstree.—Williamsburg County Commissioners; construct 8.504 mi. Manning-Kingstree road between Clarendon county line and Survey Sta. 183/50; bridge and sand-clay surface same road between Clarendon county line and Black River; 43,090 cu. yds. excavation; 36,135 cu. yds. sand-clay surfacing; 2587 lbs. steel reinforcements; 76,506 ft. B. M. creosoted lumber; 925 sq. yds. bituminous wearing surface, etc.; bids until Aug. 19; J. M. Martin, County Engr., Kingstree; W. S. Lewis, Div. Engr., Florence, S. C. (See Machinery Wanted—Road Construction.)

S. C., Laurens.—Laurens County Comms.; construct road from Princeton to Ware Shoals; \$49,000.

S. C., St. George.—State Highway Comsn., Columbia, S. C.; construct roads in Dorchester County; \$200,000; bids until Sept. 21; Klutz & Smith, Engrs., Concord, N. C. (See Machinery Wanted—Road Construction.)

Tenn., Bristol.—City Comms.; repair streets; lay curb and gutter on Pennsylvania Ave. between Maple and Linwood Sts.; asphalt on macadam base; Municipal Paving & Construction Co., Contr.

Tenn., Selmer.—W. H. Stone, Chrmn. McNairy County Court; construct 62 mi. gravel road; \$600,000 available; Evans & Mead, Contrs. for location. (Lately noted.)

Tex., Baird.—City; construct and improve streets and bridges; voted \$14,000 bonds. Address The Mayor.

Tex., Canyon.—Randall County, C. R. Fleisher, Judge; grade 17.03 mi. on State Highway No. 33; concrete culverts; 6538 cu. yds. excavation; 15,000 lbs. reinforcing steel; Federal aid; bids until Aug. 18; Nagle, Witt, Rollins Engineering Co., Engr., Dallas, Tex. Previously noted. (See Machinery Wanted—Road Construction.)

Tex., Dallas.—Dallas County Comms.; Court; resurface Oak Cliff viaduct pavement; asphaltic oil or tar preparation; \$12,835; bids opened; W. J. Powell, County Engr.

Tex., Denton.—City, J. W. Erwin, Secy.; pave N. Locust St. from square to College St.; W. Oak St. from square to city limits; combined concrete curb and gutters; storm sewers; 50,000 sq. yds. pavement; bids until Aug. 17; Koch & Fowler, Const. Engrs., Dallas, Tex. (See Machinery Wanted—Road Construction.)

Tex., Denton.—City Comms.; pave public square, N. Locust and W. Oak Sts.; \$250,000; bids until Aug. 17.

Tex., Dickens.—Dickens County Comms., K. C. Cade, County Engr.; grade and surface 7.557 mi. State Highway No. 18; bids opened.

Tex., El Paso.—City, Chas. Davis, Mayor; construct 11,572 sq. yds. Warrenite-bitulithic pavement on 6-in. compressed stone foundation; El Paso Bitulithic Co., Contr. (Lately noted—inviting bids.)

Tex., Henderson.—Rusk County Comms.; construct 45 mi. road; \$350,000; Tippet Construction Co., Contr., Mineral Wells, Tex.

Tex., Henderson.—Rusk County, R. T. Brown, Judge; construct 45 mi. roads; \$350,000; Hess & Skinner, Engrs., Dallas, Tex.; Tiptle Construction Co., Contr., Mineral Wells, Tex. (Lately noted bids until July 16.)

Tex., Marshall.—City Comms.; resurface viaduct driveway with bitulithic; \$1500; Wichita Falls Paving Co., Contr.

Tex., Plano.—City; lay 29,000 ft. 6 and 8-in. sewer line; \$33,500; install \$5000 Imhoff tank, with chloride treatment; Dalton & Campbell, Engrs.-Contrs., Dallas, Tex.

Tex., San Angelo.—Tom Green County Commissioners; pave San Angelo-Paint Rock and Mereta Rds.; \$500,000; contracts let; J. E. Beavers, Engr. (Lately noted inviting bids.)

Tex., San Antonio.—City Comms.; pave and curb Drexel Ave.; bids until Aug. 13. (See Machinery Wanted—Road Construction.)

Va., Abingdon.—State Highway Commr., G. P. Coleman, Richmond, Va.; construct Island Rd. from Abingdon to Goodson Dist. line; C. L. Hottell, Contr.

Va., Bristol.—Norfolk & Western Rwy., J. E. Crawford, Chief Engr., Roanoke, Va.; pave driveway around Union Station; asphalt construction; reported.

W. Va., Berkeley Springs.—Morgan County Comms., M. S. Harmison, Clk.; construct 3000 ft. concrete paving on Berkeley Springs-Hancock road; \$30,442; Simms & Torrington, Contrs.

W. Va., Charleston.—Kanawha County Commissioners; grade 36.9 mi. road in Cabin Creek Dist.; bids until Aug. 14; voted \$904,000 bonds. (See Machinery Wanted—Road Construction.)

W. Va., Elkins.—Randolph County Commissioners, Thaddeus Pritt, Clk.; construct 5½ mi. Staunton and Parkersburg road; 2 mi. Seneca Pike road; 4½ mi. District road; grading and drainage; bids until Aug. 26; F. A. Parsons, County Road Engr. (See Machinery Wanted—Road Construction.)

W. Va., Glenville.—Gilmer County Comms.; grade 5 mi. on Glenville-Weston road; \$25,000; bids until Aug. 24. (See Machinery Wanted—Road Construction.)

W. Va., Hinton.—Summers County Comms.; construct 3 mi. penetration macadam road along Kanawha River; J. D. French, County Engr.

W. Va., Huntington.—City, Comms. Streets and Sewers, Mat Miser; pave Dalton Ave. from Minton to 20th Sts.; \$17,500; Amos Trainor, Contr. (Lately noted bids until July 28.)

W. Va., Huntington.—City Comsn., Matt Miser, Commr. of Streets and Sewers; construct following paving: 6th St. from 10th to 11th Ave.; alley between 12th and 13th Aves., 9th and 10th Sts.; bids until Aug. 14; A. B. Maupin, City Engr. (See Machinery Wanted—Paving.)

W. Va., Martinsburg.—Greenbrier County Comms.; improve Blue Sulphur Turnpike from Monroe county line to Meadow Bluff Dist. line; vote on \$102,500 bonds; F. R. Rader, Engr., Lewisburg.

W. Va., Martinsburg.—Berkley County Court; construct 6 mi. bituminous macadam and 3 mi. Kentucky rock asphalt roads; \$100,000; C. N. Stuckey, County Road Engr.; R. R. Feller Co., Contr., Martinsburg.

W. Va., Princeton.—Mercer County Court, Lowery G. Bowling, Clerk; shale-surface 20 mi. Durhring-Goodwill road; bids until Aug. 10; Elmer C. Barton, County Road Engr., Me-

Nutt Bldg. (See Machinery Wanted—Road Construction.)

Sewer Construction.

Ala., Bessemer.—City; construct storm sewers on 20th and 22d Sts.; pave streets; \$369,566; Sullivan, Long & Hagerty, Contrs. (See Road and Street Construction.)

D. C., Washington.—District Comms., 509 District Bldg.; construct superstructure, Rock Creek Pumping Station; \$19,700; A. E. Phillips, Sanitary Engr., D. C.; Chas. H. Tompkins, Contr., 1833 30th St. N. W. (Lately noted bids until July 30.)

D. C., Washington.—District Comms., Chas. W. Kutz, Engr., 520 Municipal Bldg.; construct 2750 ft. 4-ft. 6-in. by 5-ft. 6-in. brick and concrete sewer; \$78,000; Wm. F. Cast, Contr., 3d and R Sts. N. E.

Ga., Payne City.—City, L. W. Greene, Mayor; purchase, improve and enlarge storm and sanitary sewer system; vote Sept. 7 on \$6000 bonds.

Md., Baltimore.—City; extend Stoney Run trunk sewer at University Parkway; 162 lin. ft. 18-in. vitrified pipe sewer; 2 manholes; bids until Aug. 18; H. G. Perring, Ch. Engr. (See Machinery Wanted—Sewers.)

Md., Baltimore.—City; construct hydrolytic tank No. 4, sludge digestion tank, pipe lines and appurtenances at sewage-disposal works; 262,000 lbs. reinforcing rods; 42,800 sq. ft. expanded metal; 21 gate valves and sluice gates; 536 lin. ft. cast-iron pipe; two 12-in. and ten 24-in. circular sluice gates; also construct 4 ash conveyor fillers, coal-weighing and valve-operating platforms at sewage pumping station, Eastern Ave. and President St.; bids until Aug. 18; H. G. Perring, Chief Engr. (See Machinery Wanted—Sewage-disposal Equipment.)

N. C., Wilson.—Town, D. H. Hill, Mayor; extend sewer and water systems; construct 42,000 lin. ft. sanitary and storm sewers; 110 manholes; 200 catch-basins; bids until Sept. 1; Gladding, Morrison & Ott, Engrs. (See Machinery Wanted—Sewers.)

Okl., Grandfield.—City; extend sewer system; construct 8-in. laterals and 18-in. outlets; \$35,000; machinery purchased; R. E. Hilley, Engr., Grandfield; W. M. McIntosh, Contr., Oklahoma City; plans \$85,000 water-works extension. (Lately noted extend sewer system, \$10,000 bonds.)

S. C., Chester.—Springstein Mills, H. S. Adams, Secy.-Treas.; install sanitary sewers in village with 160 employes' houses; \$24,000; H. S. Jaudon Engineering Co., Engr., Elberton, Ga.; contract let. (Lately noted bids until June 2.)

S. C., Chester.—Eureka Cotton Mills; install sewer system on mill property; \$28,000; Tucker & Laxton, Inc., Contrs., Charlotte, N. C.

S. C., Hartsville.—City; extend sewer system; construct 9800 ft. 8 and 10-in. sewers; \$34,228; Chas. C. Wilson, Const. Engr., 804 Palmetto Bank Bldg., Columbia, S. C.; Howerton-Thinsway Co., Contr., Asheville, N. C. (Lately noted bids until Aug. 4.)

W. Va., Wheeling.—Indigo Prints and Drills, J. L. Stifel & Son; erect \$75,000 factory building.

Shipbuilding Plants.

Ala., Mobile.—Repairing.—Kelly Drydock & Shipbuilding Co. E. L. Whitney, Prest., Conti and Commerce Sts.; erect 50x100-ft. machine shop; 50x70-ft. power-house; brick and steel; \$150,000; install lathes, drills, planers, steam hammers, pipe-threading tools and 200 K. W. direct-connected electric-light plant; P. N. Auger, Archt. and Engr. Supersedes recent

item. (See Machinery Wanted—Compressors; Boilers; Engines; Machine Tools; Electric-light Plants.)

Telephone Systems.

Ga., Savannah.—Navy Dept., Bureau Yards and Docks, Washington, D. C.; establish naval radio compass station on Tybee Island; \$10,000 appropriated.

Tex., Creedmoor.—Creedmoor Telephone Co. inctd.; capital \$500; Ed Steusey, W. W. Green, C. E. Johnson.

Tex., Eastland.—Southwestern Telephone & Telegraph Co.; erect 3-story exchange building; \$100,000; Mayfield Construction Co., Contr. (Previously noted.)

Textile Mills.

N. C., Albemarle.—Yarn.—Eflord Mfg. Co.; increased capital from \$500,000 to \$3,300,000.

N. C., Davidson.—Hosiery Yarns.—Delburg Cotton Mills Co.; increased capital from \$100,000 to \$1,000,000.

N. C., Mt. Holly.—Yarn, etc.—American Yarn & Processing Co. inctd.; capital \$400,000; C. E. Hutchinson, J. M. Springs; both Mt. Holly; J. C. Lowe, Charlotte, N. C.

S. C., Easley.—Cotton Products.—Glenwood Cotton Mills; increased capital from \$600,000 to \$1,200,000.

S. C., Pickens.—Cotton Products.—Pickens Mill; increased capital from \$250,000 to \$750,000.

S. C., York.—Yarns.—Lockmore Cotton Mills; plans to increase capital by \$100,000.

Tex., Madisonville.—Cotton Products, etc.—Joe E. Webb, County Attorney; contemplates construction mill to mfr. cotton and woolen goods. (See Machinery Wanted—Textile Equipment.)

Tex., Stamford.—Tire Fabrics.—Continental Tire & Cotton Co., S. M. Strange, Prest.; erect \$600,000 brick, concrete and steel building; bids until Sept. 1; install 15,000 or more spindles; mchy. bids about Nov. 1. (See Machinery Wanted—Textile Equipment.)

Water-Works.

Fla., Clermont.—City; install water-works; voted \$30,000 bonds. Address The Mayor.

Fla., Marianna.—Robt. W. Parr, Mapleton, Ill.; install water-works on 1000-acre plantation.

Ga., Payne City.—City, L. W. Greene, Mayor; purchase, improve and enlarge water-works; vote Sept. 7 on \$300 bonds.

La., Franklinton.—Town; install water-works; erect 50,000 to 75,000 gals. capacity steel tank on 125-ft. steel tower; voted \$37,000 bonds. Address The Mayor.

La., Opelousas.—City, Mayor Loeb; repair, remodel and enlarge water-works; \$153,000. (Lately noted voted \$250,000 bonds to improve water, electric-light and sewer systems.)

Md., Elkton.—City; build filtration plant; Broad Creek Contracting Co., Contr. for building; \$16,500; contract let for equipment. (Lately noted.)

Miss., Picayune.—City; install water-works; vote Aug. 31 on \$65,000 bonds. Address The Mayor.

N. C., Ayden.—Town, J. K. Quinerly, Clk.; install water and light systems; \$22,000 bonds.

N. C., Mebane.—Town, W. S. Crawford, Mayor; drill well for water. (Previously noted to construct \$125,000 water system, Wm. M. Platt, Durham, N. C., being engineer.)

N. C., Wilson.—Town, D. H. Hill, Mayor; extend water and sewer systems; improve streets; lay 13,700 lin. ft. 6-in. class B water

mains; bids until Sept. 1; Gladding, Morrison & Ott, Engrs. (See Machinery Wanted—Water-works.)

Okla., Grandfield.—City; plans water-works extension; \$55,000. Address The Mayor.

S. C., Greenville.—City; construct water-works; voted \$100,000 bonds. Address The Mayor. (Lately noted to vote.)

Tex., Baird.—City; improve and extend water supply; voted \$700 bonds. Address The Mayor.

Tex., Cisco.—City; construct dam across Sandy River, 3 mi. from city; Ambursen type; reinforced hollow concrete; 1321 ft. long; 125 ft. high; impound 15,000,000 gals. water, covering 1000 acres at average depth of 75 ft.; specifications call for 37,000 yds. concrete, 12,000 lbs. asphalt, 1,500,000 lbs. reinforcing steel, 95,000 yds. excavation, etc.; \$915,000; Henry Exall Elrod, Engr., 220 Interurban Bldg., Dallas, Tex.; H. F. Friedstedt, Contr., Chicago, Ill. (Previously noted inviting bids.)

Tex., Dallas.—City, Frank W. Woxenraft, Mayor; improve and extend water-works; \$402,000; lay water mains; construct additional artesian well and pump at Oak Cliff; \$90,000; also pump at Turtle Creek Station; \$65,000. (Lately noted voted \$400,000 bonds.)

Tex., Georgetown.—Town; improve water system; install laboratory. Address The Mayor.

W. Va., Blueville.—Parish Realty Co., Grafton, W. Va.; install water and electric-light systems; \$5-acre residential development.

Woodworking Plants.

Ala., Birmingham.—Staves.—Alabama Stave Co.; increased capital from \$15,000 to \$150,000.

Fla., Fort Meade.—Veneer.—Hart Lumber & Veneer Co. organized; C. M. Hart, Prest.; W. P. Collins, Secy.-Treas. (Lately noted inctd., capital \$100,000.)

Fla., Tampa.—Furniture.—Palm Craft Co.; rebuild burned plant; erect 96x220-ft. brick building; saw-tooth construction; fireproof; corrugated metal roof; concrete or asphalt floor; fireproof; install sprinkler system; build drykilns; \$40,000; M. Leo Elliott, Archt.

Miss., New Albany.—Staves.—C. H. Wright Stave Co.; rebuild burned plant; loss \$10,000.

Miss., Valley.—Spokes.—Valley Spoke Co., C. E. Mann, Propr.; rebuild burned spoke factory; loss \$5,000.

N. C., Wilmington.—Ready-cut Houses.—Aladdin Co., J. M. Baillie, Local Mgr.; enlarge plant; \$10,000; reported.

Tex., Dallas.—Sash and Doors.—Dallas Sash & Door Co. inctd.; capital \$50,000; E. M. Doughty in charge; subsidiary of Huttig Sash & Door Co., St. Louis, Mo.; establish plant; first unit 20,000 sq. ft. floor space.

Fire Damage.

Ark., Fort Smith.—Harding Glass Co.'s plant; loss \$200,000.

Ark., McPhearson.—Sid Matthew's gin.

Ky., Belcher.—Justice Lyons Lumber Co.'s sawmills.

Ky., Greensburg.—Greensburg Loose Leaf Tobacco Warehouse Co.'s building; \$10,000.

Ky., Louisville.—Klein Furnishing Goods Co.'s building, 527 W. Main St.; \$150,000.

Ky., Vanceburg.—Carter House; loss \$40,000.

La., Rayne.—Martin Petitjean's residence; loss \$15,000.

La., Monroe.—L. D. McLain Estate and W. L. Morris' buildings; \$35,000.

Md., Harney.—David Zentz's mill; loss \$800.

Miss., Durant.—Mrs. W. H. Stokes' boarding house; \$6000.

Miss., New Albany.—C. H. Wright Stave Co.'s plant; loss \$10,000.

Miss., Pontotoc.—Earl Miller's store; New Albany Wholesale Grocery Co.'s store; J. H. Latham Co.'s building; Rauch Produce Co.'s building; J. O. Smith's store and other buildings; W. C. Pittman building, and others; loss \$500,000.

Miss., Water Valley.—F. M. Edwards' gin.

Miss., Valley.—Valley Spoke Co.'s factory; C. E. Mann, Propr.; loss \$5,000.

Mo., St. Louis.—St. Louis Iron & Metal Co.'s warehouse, 115 O'Fallon St.; \$10,000.

Mo., Swedeborg.—C. C. Vikers' store; W. A. Patterson's store; W. J. Rouse's grocery; postoffice; \$60,000.

S. C., Shelton.—Shivar Springs Co.'s bottling plant.

Tex., Pharr.—Humble Oil & Refining Co.'s lubricating oil mill, office building, etc.

Tex., Eastland.—Eugene Woods' building.

Va., Norfolk.—Barracks and mess hall, U. S. Army Base; loss \$10,000.

Tex., Marfa.—Williams' Vulcanizing Shop; Hoffman & McDaniel Saddle Shop; Mrs. Lizzie Crosstons' 2 store buildings; Mrs. R. H. Kennedy's residence; Magnolia Oil Corp.'s office and other buildings; \$30,000.

Tex., Spofford.—Ranch house of W. N. Fleming, Victoria, Tex.

Va., Dyke.—B. G. Snow's flour mill; loss \$20,000.

Va., Lynchburg.—Wallace Logan's residence, near Six-Mile Bridge; \$7000.

Va., Portsmouth.—Lynnhaven Hotel, Ocean Park, Vanture & James, Props.; \$25,000.

Tex., Waxahachie.—Gilliam & Dorsey's drug store; \$6000 to \$7000.

BUILDING NEWS

EXPLANATORY.

Buildings costing less than \$10,000 not covered in these reports

BUILDINGS PROPOSED

Apartment-Houses.

Ark., Springdale.—Vernon Brooks; erect 2-story stone building, Spring St., adjoining similar building just completed; convert upper floors of both buildings into apartments; portion of lower floor for Ozark Trail Motor Co.

D. C., Washington.—W. R. Vannman; erect \$10,000 apartment-house, 1415 Girard Ave.;

4 stories; 50x119 ft.; brick; Stearn & Tomlinson, Archts., Continental Trust Bldg.

D. C., Washington.—Harry M. Crandall; remodel apartment-house, 18th and Calvert Sts. and Columbia Rd. N. W.

Fla., Clearwater.—C. H. Brush; erect 2-story apartment-house; 4 six-room apartments.

Fla., Daytona.—Julian A. Arroyo; erect \$250,000 apartment-house; hollow tile; tile floors; electric lighting; Jacob Espendahl.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Arch.: other details not determined; construction this year depends upon financial arrangements.

Fla., Miami.—Dr. Edwin M. Jones: erect \$15,000 three-story apartment-house, 7th St. and Ave. B; concrete block; 30x50 ft.

Fla., Plant City.—Mrs. Julia Purnelle: convert residence, Thomas St., into apartment-house.

La., Lafayette.—Dr. F. E. Girard: move Elks' former building and convert into apartment-house.

N. C., Charlotte.—V. J. Guthery, representing interests; reported considering remodeling Horner school property, Myers Park, for apartments; plans prepared.

Association and Fraternal.

Ala., Anniston.—Rotarian Club; promoting \$200,000 Y. M. C. A. building.

Ark., Russellville.—Riggs-Hamilton Post No. 20; plans to erect \$75,000 memorial building.

D. C., Washington.—Daughters of American Revolution, Mrs. Geo. W. White, Curator-General; plan to erect \$200,000 building in rear of Continental Memorial Hall.

Fla., Orlando.—Christian Alliance; erect \$16,000 home.

S. C., Charleston.—Loyal Order of Moose; plans to erect clubhouse.

Tex., Dallas.—Masonic Temple Assn., Sam P. Cochran, Prest.; erect \$100,000 temple on site of old Turner Hall.

Tex., Goree.—Ancient Free and Accepted Masons; erect 2-story building.

Tex., Goree.—Independent Order of Odd Fellows will erect 2-story building.

W. Va., Charleston.—Young Women's Christian Assn.; erect building, Quarrier St.; 3 stories and basement; 40 rooms; brick; 60x120 ft.

Bank and Office.

Md., Baltimore.—Provident Savings Bank, Howard & Saratoga Sts.; erect branch building 2118 E. Monument St.; \$40,000; 2 stories; W. W. Emmart, Archt., 1101 Union Trust Bldg.

N. C., Asheville.—Donnahop & Rawls; purchased lot, College and Penland Sts.; considering erecting office building.

N. C., Asheville.—C. J. Calberg and C. P. Ryan; purchased site on Haywood St., adjoining Haywood Bldg.; considering erecting office building.

N. C., King.—Farmers and Merchants' Bank; erect building; 26x36 ft.; brick; concrete floors; metal ceilings; interior tile; safes; will not erect by contract. Address W. E. Hartman. (Lately noted.)

Tex., El Paso.—State National Bank; considering erection of building at San Antonio and Oregon Sts.

Va., Norfolk.—Standard Oil Co., F. C. Bigley, Pur. Agt.; erect building for office, garage and paint shop, Brambleton; 120x90 ft.; one story; brick.

Va., Vinton.—First National Bank, Geo. M. Nuse, Prest.; erect 2-story building; brick and Louisiana limestone; Geo. W. Hutchinson, Archt. (Lately noted.)

W. Va., Clarksburg.—Empire National Bank; purchased property in rear of present building; plans to erect addition.

Churches.

Ala., Brewton.—Presbyterian Church, W. T. Neal, Chrmn. Comm.; plans to erect \$25,000 brick building on Bellville Ave. to replace present structure.

Ala., Gadsden.—First Baptist Church; purchased site, Chestnut and 8th Sts.; erect \$100,000 building; Dr. Geo. S. Vaun interested. (Previously noted.)

Ala., Gadsden.—First Christian Church; purchased site, Forest Ave. and 10th St.; erect \$40,000 to \$50,000 building. Address The Pastor.

Ala., Mobile.—Broad Street Methodist Church; expend \$18,000 to enlarge building. Address The Pastor.

Ark., De Witt.—Methodist Episcopal Church; erect \$60,000 building. Address The Pastor.

Ga., Atlanta.—Library.—Fulton County and City of Atlanta; considering erecting Carnegie library for negroes; \$50,000. Address The Mayor.

Ky., Nicholasville.—St. Luke's Catholic Church, Rev. Wm. O'Hare, Pastor; erect \$40,000 building, S. Main St.; stone; John T. Comes, Archt., Renshaw Bldg., Pittsburgh, Pa.; H. L. Elder, Henry Mackey and others, Building Comm. (Lately noted.)

La., New Orleans.—Freight Shed.—Board of Commrs. Port of New Orleans, 200 Court Bldg.; bids until Aug. 17 to erect \$40,000 freight shed; 100x220 ft.; structural steel; composition roof on wood sheathing; wood decking on wharf; wire glass; ventilators; R. O. Comer, Dsgn. Engr.; Arsene Perillat, Chf. Engr. (Lately noted.)

N. C., Charlotte.—Seversville Baptist Church; erect \$12,000 building. Address The Pastor.

N. C., Charlotte.—Baptist Church; erect \$12,000 building, Rozelle Ferry Rd.; concrete and brick. Address The Pastor.

N. C., Mayworth.—Mays Mills Co.; erect churches. (See Contracts Awarded—Bank and Offices.)

N. C., Mayworth.—Methodist Church; erect building; Gothic design; terra-cotta trim; tile roof; art glass windows. Address The Pastor.

N. C., Mayworth.—Baptist Church; erect building; Gothic design; terra-cotta trim; tile roof; art glass windows. Address The Pastor.

N. C., Wilmington.—Immanuel Presbyterian Church, Rev. D. T. Caldwell, Pastor; erect \$100,000 building, 5th and Meares Sts.; James F. Gause, Archt.

N. C., Wilmington.—Immanuel Presbyterian Church; erect \$75,000 building; brick; frame partitions; slate roof; wood floors; steam heat, \$3000; electric lights; hollow fireproof tile; ornamental terra-cotta; rolling partitions; Jas. F. Gause, Archt.; day labor. (Lately noted.)

Okla., Muskogee.—Central Baptist Church, Rev. B. A. Pugh, Pastor; erect \$17,000 Sunday-school building; 42x64 ft.; brick veneer; metal shingle roof; concrete and pine floors; metal ceiling; rolling partitions; hot-air heat, \$2000; Earl L. Eastman, Archt. Address S. M. McManus, Muskogee Iron Works. (Lately noted.)

Okla., Ponca City.—Presbyterian Church; erect \$75,000 building; brick; white stone trim; colonial type. Address The Pastor.

S. C., Florence.—First Methodist Church; considering erecting \$150,000 building or expanding \$65,000 to remodel present structure; P. R. Jones, M. M. Striplin and others, Building Comm.

Tex., Houston.—Tuam Avenue Baptist Church; erect \$17,500 frame building, Day and W. Main Sts. Address The Pastor.

Tex., Orange.—First Methodist Church; erect \$85,000 building; plans to complete first story at present at cost of \$20,000. Address The Pastor.

Tex., San Antonio.—St. Paul's Methodist Church; erect \$80,000 concrete and brick building, South Center St. Address The Pastor.

Tex., Thrall.—Lutheran Church; erect building. Address The Pastor.

Va., Richmond.—Mount Clement Baptist Church; erect addition to building. Address The Pastor.

W. Va., Charleston.—Ruffner Memorial Presbyterian Church, Dr. Hugh Nicholson, Chrmn. Building Comm.; erect \$100,000 building; Greek-Ionic design; 66x111 ft.; brick; stone columns; auditorium to seat 600; gymnasium, 42x66 ft.; Sunday-school rooms, office, parlor, etc.

City and County.

La., Shreveport.—Detention Home.—Parish Police Jury and City of Shreveport, John McW. Ford, Mayor; considering erecting juvenile detention home; \$50,000 to \$75,000.

Md., Baltimore.—Fire-alarm Station.—City, Wm. F. Broening, Mayor; erect central fire-alarm station, Market Place.

Miss., Meridian.—Auditorium.—City, W. H. White, Clerk and Treas.; plans \$100,000 bond issue to erect auditorium seating 3000; Burt Stuart, City Archt. (Previously noted.)

Okla., Okmulgee.—Library.—Library Board, City Hall; erect \$65,000 stone library; Smith, Rea & Lovett, Archts. Address Library Board.

S. C., Greenville.—Hospital, etc.—City; voted \$400,000 bonds for improvements; \$150,000 for city hospital; \$50,000 for fire stations and equipment. Address The Mayor. (Lately noted.)

Tenn., Jackson.—City Hall, etc.—City, Mayor J. D. Johnson; purchased buildings, Chester St.; plans to remodel for city hall, auditorium, etc.

Courthouses.

Miss., Tunica.—Tunica County Board of Supervisors, L. C. Shannon, Chancery Clerk; bids until Sept. 6 to erect courthouse; \$250,000; separate bids on plumbing, electric wiring, heating, electric fixtures, clock and other items; plans and specifications at office Mr. Shannon and will be issued from office Frank P. Gates Co., Archt., Clarksdale, Miss. (Lately noted.)

Mo., Kansas City.—County Court, A. L. Cooper, Counsel; considering calling election on \$5,000,000 bonds to erect courthouse.

Mo., Sedalia.—Pettis County Commrs.; considering rebuilding courthouse, \$100,000, instead of erecting \$500,000 building; Hopkins B. Shain, Circuit Judge. (Lately noted to erect temporary building.)

Dwellings.

D. C., Washington.—H. R. Howenstein Co., 1314 F St. N. W.; erect 10 dwellings and garages, 751-69 Princeton Pl. N. W.; \$50,000; 2 stories; brick; 9 rooms; ultimate plans call for 135 dwellings.

Fla., Bradentown.—Dr. H. Gates; erect residence.

Fla., Bradentown.—A. M. Garrison; erect residence.

Fla., Bradentown.—J. K. Singletary; erect 2 dwellings.

Fla., Daytona.—Raymond Key; erect \$10,000 bungalow, Schulte Park.

Ga., Athens.—C. E. Sims; purchased 15 lots, King Ave.; erect residence; also several rent dwellings.

Ky., Scottsville.—Edward F. Welch; erect \$25,000 residence; 8 rooms; sandstone veneer.

neered; slate roof; hot-water heat; oak floors; white and mahogany trim; porcelain plumbing fixtures; C. K. Colley, Archt., Fourth and First National Bank Bldg., Nashville, Tenn.; owner receives bids and lets contracts.

Miss., DeSoto.—Mrs. J. R. Chancellor; erect \$10,000 residence.

N. C., Asheville.—L. M. Sumner; erect \$15,000 residence, Norwood.

N. C., Chapel Hill.—John Spunt Hill, Durham, and W. S. Robertson, Chapel Hill; erect 12 brick cottages, Cameron Ave. and Columbia St.; \$90,000; one story; 4 rooms; contract let for two.

N. C., Charlotte.—Carolina Real Estate Co.; erect 10 dwellings, Ward 2; \$15,000.

N. C., Mayworth.—Mays Mills Co.; erect 2 dwellings. (See Contracts Awarded, Bank and Office Buildings.)

S. C., Gaffney.—H. J. Russell; plans to organize \$100,000 home-building corporation.

S. C., Charleston.—Julius M. Visanska; reported to erect \$30,000 residence.

S. C., Spartanburg.—Wallace Whitlock; erect 5 dwellings; \$20,000; 5-6 rooms; wood; metal shingle roof; wood floors; electric lights; Geo. Abernathy, Archt. (Lately noted.)

Tenn., McMinnville.—Jas. A. Seaman; erect \$18,000 brick veneered bungalow; 8 rooms; steam heat; asbestos tile roof; oak floors; C. K. Colley, Archt., Fourth and First National Bank Bldg., Nashville; owner receives bids and lets contracts.

Tenn., Memphis.—W. Levy; erect \$10,000 brick-veneer residence, 270 Buena Vista St.; 1 story; 8 rooms.

Tenn., Memphis.—Judge Frank M. Guthrie; erect \$20,000 residence, 1650 N. Parkway; hollow tile and stucco; 10 rooms.

Tex., Fort Worth.—Transcontinental Oil Co.; erecting 10 cottages; \$3000 each; contemplates 5 additional.

Tex., San Antonio.—John H. Cunningham; erect \$30,000 residence; 2 stories; stone; colonial style; clay-tile roof; hardwood floors; Phelps & Dewees, Archts.

Tex., San Antonio.—Lee B. James, Belknap Ave. and Linwood Blvd.; erect \$50,000 residence; 36x55 ft.; 2 stories; concrete frame, hollow tile, stucco facing; clay tile roof; hardwood floors; hot-air heat; Ralph Cameron, Archt., Central Trust Bldg.

Tex., San Antonio.—W. S. Seng; erect \$25,000 residence; 26x65 ft.; 2 stories; brick; tile roof; hardwood floors; hot-air heat; Ralph Cameron, Archt.

Tex., San Antonio.—Dr. F. W. Sorrell; erect \$50,000 residence; 25x60 ft.; reinforced concrete frame; hollow tile and stucco facing; red clay tile roof; hardwood floors; hot-air heat; bids opened Aug. 18. Address Phelps & DeWees, Archts., Gunter Bldg.

Tex., Waco.—E. P. Hunter; erect \$21,500 residence, 23d and Gorman Sts.

W. Va., Huntington.—James J. Weller, erect residence, Ricketts Place.

Va., Cheriton.—Mrs. Nellie Nottingham; erect \$10,000 residence; 38x25 ft.; 2 stories; frame; Diehl & Vance, Archts., Virginia-Carolina Bldg., Norfolk.

Va., Newport News.—Charles Barclay, 3004 Washington Ave.; erect \$15,000 residence on James River; 45x35 ft.; 11 rooms; frame and stucco; slate roof; McKee & Williams, Archts.; considering bids. (Lately noted.)

W. Va., Wheeling.—Chamber of Commerce; promoting \$500,000 company to erect dwellings.

Government and State.

D. C., Washington.—Treasury.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt.; construct roof and improve Treasury Dept. building; \$280,000.

Mo., St. Louis.—Hospital.—Treasury Dept., James A. Wetmore, Act. Supv. Archt., Washington, D. C.; bids until Aug. 31 for toilet-rooms in U. S. Marine Hospital; copies of drawings and specifications from custodian at St. Louis or from office of Supv. Archt. (See Machinery Wanted—Plumbing.)

Hospitals, Sanitariums, Etc.

Ga., Macon.—Oglethorpe Private Infirmary Incptd.; \$40,000 capital stock; A. R. Rozar, Thos. H. Hall and others.

Ky., Paducah.—Mike Williams, Commr. Public Property; bids until Aug. 9 to erect extension nurses' home, Riverside Hospital, including plumbing, heating, electric conduits, wiring, etc.

La., DeRidder.—W. R. Griffin, Orange, Tex.; preparing plans to erect \$50,000 hospital; 76x80 ft.; 3 stories; hollow tile and wood frame; Johns-Manville roofing; wood and concrete floors; steam heat; electric lights; hollow fireproof tile; wire glass. Address J. C. Fowler, Secy. Chamber of Commerce.

Md., Annapolis.—Emergency Hospital; erect nurses' home.

Miss., Oxford.—Oxford Hospital Incptd. with \$30,000 capital; Dr. J. C. Culley, Dr. B. S. Guyton and L. C. Andrews.

N. C., Lexington.—Davidson County Medical Society and Chamber of Commerce interested in promoting erection of hospital; Gen. Zeb. V. Walker, Dr. J. C. Leonard and others, committee to investigate details.

N. C., Raleigh.—Rex Hospital, W. A. Cooper, Prest. Board of Trustees; improve building and erect addition; 100 beds; erect nurses' home, Fayetteville and South Sts. (Lately noted.)

N. C., Wilmington.—Dr. E. S. Bollock will erect \$70,000 hospital; 80x78 ft.; brick and reinforced concrete; Barrett specification roof; cement floors; ornamental terra-cotta; interior tile; wire glass; James B. Lynch, Archt., Roanoke. (Lately noted.)

S. C., Greenville.—City; voted \$400,000 bonds, including \$150,000 bonds to erect municipal hospital. Address The Mayor. Lately noted. (See City and County.)

Tex., Austin.—State Board of Control; erect \$110,000 hospital, State Confederate Home.

Tex., Ft. Worth.—Sisters of The Incarnate Word; erect \$400,000 extension to St. Joseph's Infirmary, 1607 S. Main St.; 170x95 ft.; 5 stories; reinforced concrete; brick and terra-cotta; stone base; Sanguinet & Staats, Archts.

Tenn., Memphis.—Dr. Willis C. Campbell; erect \$20,000 hospital, 869 Madison Ave.; 1 story and half basement; reinforced concrete and brick.

Va., Portsmouth.—Drs. Claud, Barlow, Blisoly and others; purchased apartment-house, Court St.; convert into hospital; erect additions, sun parlor, roof garden, etc.

Hotels.

Fla., Jacksonville.—Gus Muller and Fred Auerbach; expend \$38,000 to improve Burbridge Hotel, Clay and Forsyth Sts.; install dining-room, convert present dining-room into store, plate-glass front, etc.

Ga., St. Simons Island.—Brunswick-St. Simons Highway Association reported to erect hotel; also construct road between Brunswick and St. Simons Island.

Md., Salisbury.—Shoreman Hotel Corp., Jesse D. Price, Prest.; erect \$200,000 hotel; 84x85 ft.; 8 stories; 110 bedrooms, 67 with bath; tapestry brick; limestone trim; steam heat; electric lighting; cement sidewalks; E. H. Glidden and Theodore Wells Pietsch, Archts., 1210 American Bldg., Baltimore, receive bids until Aug. 16; following contractors estimating: Hicks, Tase & Norris, 106 W. Madison St.; Frainie Bros. & Haigley, 18 Clay St.; R. B. Mason, 308 W. Madison St.; Chas. L. Stockhausen Co., Gay and Water Sts.; Singer-Pentz Co., Equitable Bldg.; all of Baltimore; Standard Construction Co., 1713 Sansom St., Philadelphia; T. H. Mitchell, Hastings & Parsons, Wm. Booth and L. Richardson, all of Salisbury. (Previously noted.)

N. C., Lakeview.—Tom Kelly, Talbot Johnson and Sam Richardson; plan development of resort; erect hotel.

N. C., Rutherfordton.—Chamber of Commerce; appointed committee to investigate proposition to erect hotel.

N. C., Warrenton.—Town Commrs., R. J. Jones, Clerk; election Sept. 7 on proposition to invest \$75,000 in stock Warren Hotel Co. to erect hotel.

Tenn., Memphis.—Dixie Hotel Co.; expend \$10,000 to convert 3-story building, 99 S. Main St., into hotel.

Tex., San Antonio.—San Antonio Real Estate Board; plans company to erect \$75,000 hotel, Medina Lake.

Miscellaneous.

Fla., Apopka.—Clubhouse, etc.—Board of Trade; promoting erection of clubhouse and dock, Lake Apopka; also construction of road connecting Winter Garden and Apopka.

Fla., Pensacola.—Clubhouse.—Pensacola Yacht Club; erect building near Palafox-St. wharf; 3 stories; lower floor for store and restaurant; upper floor, club; space under building for boats.

Ga., Macon.—Amusement Park.—Lakeside Park Co. Incptd. with \$10,000 capital; Oscar E. Reddy and others.

Md., Baltimore.—Clubhouse.—Maryland Club; expend \$100,000 for improvements; 15 bedrooms; library; recreation-rooms, etc.; Josiah Pennington, Archt., 311 N. Charles St.

Mo., St. Louis.—Tearoom, Bakery, etc.—W. L. Schachner & Co., Central National Bank Bldg.; leased ground floor of Central National Bank Bldg. for Missouri Sweets Distributing Corp.; expend \$150,000 for improvements and equipment for tearoom, soda parlor, bakery, etc.; Wm. Henry Gruen, Chemical Bldg., and Roy Selden Price, Archts.

N. C., Greensboro.—Community Buildings.—Proximity Mfg. Co., Julius W. Cone, V.-P.; reported to expend \$500,000 to erect community buildings at Proximity and White Oak Mills; former, reinforced concrete and brick veneer; both structures to contain gymnasium, swimming pool, etc.

N. C., Lexington.—Clubhouse.—Chamber of Commerce; promoting \$20,000 to \$25,000 country club; Geo. L. Hackney and others, committee on site.

N. C., Mayworth.—Women's Building, etc.—Mays Mills Co.; erect women's building and other structures. (See Contracts Awarded—Bank and Office Buildings.)

Railway Stations, Sheds, Etc.

Fla., Orlando.—American Express Co.; erect building; 50x80 ft.

Miss., Quitman.—Mobile & Ohio R. R., B. A. Wood, Ch. Engr., Mobile, Ala.; enlarge depot.

N. C., Mayworth.—Southern R. R., B. Her-

man, Ch. Engr. Maintenance of Ways, Charlotte; reported to enlarge station, rebuild train sheds and concourse.

Schools.

Ark., Altus.—Dist. School Board; bids until Aug. 14 to erect \$20,000 school; 47x75 ft.; 2 stories; brick; slate roof; wood floors; plans at Bank of Altus and office J. H. Bliss, Archt., Little Rock. Address J. M. Hopper, Altus.

Fla., Pensacola.—Escambia County Board of Public Instruction, A. S. Edwards, Supt.; bids until Aug. 9 to erect 2-room frame addition to school building, Myrtle Grove, and 2-room frame building, Byrnesville; plans and specifications at office Walker D. Willis, Archt., 619 Blount Bldg.

Ga., Attapulgus.—Trustees Consolidated School Dist., P. P. Perkins, Secy.; erect school building; 1 story; 6 rooms; considering bids.

Ga., Bostwick.—Trustees School Dist. No. 1, H. S. Taylor, Chrmn.; erect \$20,000 school building; brick; metal ceilings; ornamental terra-cotta; wood block and concrete floors; ventilators. Address Mr. Taylor. (Lately noted.)

Ga., Camilla.—Board of Education; erect school building.

Ga., Metter.—Board of Education; erect high-school building; \$40,000 bonds voted.

La., Kolin.—Rapides Parish School Board, J. W. Bolton, Prest.; erect 1-story frame building at Kolin and 1-story frame building near Willow school; C. Scott Yeager, Archt., Alexandria, La., receives bids until Aug. 9.

La., Lapine.—T. O. Brown, Supt., Monroe, La.; bids until Aug. 14 to erect teacherage; plans and specifications at office J. W. Smith, Archt., Monroe.

Md., Annapolis.—Anne Arundel County Commissioners; considering calling election on \$150,000 bonds to erect county schools.

Md., Denton.—Caroline County Comms.; considering calling election on \$60,000 bonds to erect school, Denton; also \$60,000 bonds to erect school, Greensboro.

Md., Eastman.—Dorchester County Commissioners; considering calling election on \$350,000 bonds to erect school buildings, bridges and roads in county.

Md., Greensboro.—Caroline County Comms., Denton; considering calling election on \$60,000 bonds to erect school. (See Md., Denton.)

Miss., Corinth.—City, M. T. Sharp, Clerk; sold \$15,000 school bonds.

Tex., Junction.—School Board; erect \$75,000 high school; 2 stories and basement; 12 rooms; concrete-frame; brick facing and tile; composition roof; yellow-pine floors; jacketed stoves; bids opened in about 2 weeks. Address Phelps & DeWees, Archts., Gunter Bldg., San Antonio.

Miss., Vinville.—County Board of Education, Meridian, Miss.; erect school building; considering bids.

Miss., Washington.—Washington Consolidated School Dist.; votes Aug. 13 on \$10,000 bonds; R. B. Forman, C. A. Braden and J. S. Marshall, Comms. of Education.

N. C., Lexington.—Town, J. T. Hedrick, Mayor; sold \$75,000 bonds for school building.

N. C., Weaverville.—Runcombe County Board of Education, Ethel Terrell, Supt., Asheville; bids until Aug. 11 to erect schools at Weaverville and Emma; \$40,000 and \$50,000, respectively; plans and specifications at office of Supt.; Charles C. Hook, Archt., Charlotte. (Lately noted.)

N. C., Wilmington.—Board of Education;

considering \$1,250,000 bond issue for negro schools.

Okla., Wagoner.—Board of Education; erect school building, Okay; \$25,000 bonds voted.

S. C., Great Falls.—Great Falls and Rossville School Dist. will consolidate; erect high-school building. Address County Board of Education, Chester, S. C.

S. C., Rodman.—Rodman, Prior, Knox and Pleasant Grove School Dist. will consolidate; erect high school. Address County Board of Education, Chester, S. C.

S. C., Walterboro.—H. W. Black, Jr.; erect brick building.

Tex., Goodnight.—Board of Education; erect \$25,000 school; bonds available. Address J. M. Crain.

Tex., Robstown.—School Board; erect \$40,000 building; 50x108 ft.; composition flat roof; wood floors; stoves; plans finished in about week. Address Will N. Noonan, Archt., Moore Bldg., San Antonio. (Lately noted.)

Va., Appalachia.—Richmond School Dist.; votes on \$75,000 bond issue; erect \$50,000 school, Appalachia; \$17,500 school, East Stone Gap; \$7,000 school, Buffalo. Address Board of Education.

Va., East Stone Gap.—Richmond School Dist. votes on \$75,000 bond issue; erect \$17,500 school. (See Va., Appalachia.)

W. Va., Barboursville.—Morris Harvey College, Dr. R. T. Webb, Prest.; purchased Shaw block; plans to erect brick gymnasium in rear.

W. Va., Lewisburg.—Davis-Stuart School, Inc.; erect \$50,000 home for dependent children; several buildings, cottage plans; stone; slate roof; concrete and hardwood floors; hot-water heat; electric lights; metal ceilings; interior tile; rolling partitions; H. H. Buck, Archt. (Lately noted, W. Va., Greenbrier.)

W. Va., Princeton.—East River Dist. Board of Education; erect several school buildings; also repair number of buildings; A. F. Wy-song, Archt.; contract let Aug. 9.

Stores.

Ala., Tuscaloosa.—Allen-Jemison Hardware Co.; reported to erect block of 6 or 8 stores and warehouses, 6th St. and 25th Ave.

Ark., Bentonville.—Jackson Dry Goods Co., C. M. Lawson, Prest., Fayetteville, Ark.; erect addition to building; 21x56 ft.; 3000 ft. floor space.

Fla., Lakeland.—L. W. Yarnall; erect \$50,000 store and apartment building, Pine St. and Tennessee Ave.; 3 stories. (Lately noted.)

Fla., St. Petersburg.—Miss Elizabeth Boeck; erect store building, Central Ave.; 3 stories; brick front; Denison tile side walls; Geo. Feltham, Archt.

Ga., Atlanta.—A. G. Rhodes; expend \$30,000 to improve building; day work.

Ga., Atlanta.—Y. F. Freeman; expend \$10,000 to repair business building.

Okla., Tulsa.—H. Castle; erect \$100,000 store building, 121 E. 3d St.; 3 stories; steel and concrete.

Tenn., Knoxville.—Joseph Knaff; erect brick

building, Gay St.; 70x50 ft.; 2 stories and basement; \$30,000 to \$35,000. (Lately noted.)

Tenn., Memphis.—W. J. Brinkley; erect \$30,000 store and garage building, 136 Church St.; fireproof; 2 stories; reinforced concrete and brick.

Tex., San Antonio.—F. W. Woolworth Co.; erect \$125,000 building, Houston St. and Alamo Plaza; reinforced concrete; 3 stories; 105x110 ft.; terra-cotta and gray faced brick; several entrances; Adams & Adams, Archts.; bids opened Aug. 9.

W. Va., Wheeling.—Albert Kunkle; repair building; 3807 Eoff St.; \$10,000.

Theaters.

Ark., Little Rock.—M. B. Sanders; remodel Royal Theater for Gem Amusement Co.; increase seating capacity to 1400; enlarge rest-room; install \$10,000 pipe organ, seating, new front; Sanders & Ginocchio, Archts.

Fla., Lake Wales.—Lake Wales Amusement Co., M. M. Ebert and others; erect moving-picture theater and restaurant; \$20,000; brick; 1 story; theater to seat 600; B. C. Bonfoey, Archt., Tampa.

W. Va., Charleston.—Plaza Theater; erect fireproof addition for dressing-rooms, etc.

Warehouses.

Ala., Selma.—Otto Erhart; erect \$10,000 warehouse.

Ala., Tuscaloosa.—Allen-Jemison Hardware Co.; reported to erect warehouse. (See Stores.)

Fla., Arcadia.—Osceola Fertilizer Co., Jacksonville; erect concrete warehouse.

Va., Richmond.—Smith-Courtenay Co.; erect warehouse, Bainbridge St., between 7th and 8th.

La., New Orleans.—Appalachian Corp., Louis B. Magood, Prest.; rebuild unit of warehouse lately reported damaged by fire; plans \$500,000 building and \$100,000 conveyor from warehouse to docks.

Md., Baltimore.—Dumbo Bros.; erect warehouse, 22 S. Howard St.; \$25,000; 60x100 ft.; mill construction; fireproof; sprinkler system; extend steam-heating plant; electric power and lighting; Geo. R. Callis, Jr., Archt., American Bldg.; bids opened Aug. 12; following contractors estimating: Milton C. Davis, 902 W. 36th St.; Merin Bros., 1024 E. Baltimore St.; G. L. Schnader, 2023 McElderry St.; Consolidated Engineering Co., Calvert Bldg.; Calvin Barnes.

Mo., St. Louis.—H. J. Tiemann, Tiemann Elevator Co.; purchased 5-acre tract, Oak Hill branch of Missouri Pacific R. R.; considering erecting warehouse and elevator.

N. C., Charlotte.—Lewter F. Hobbs, Norfolk, Va.; leased building 10 and 12 Brevard St.; will erect additional building for warehouse and service station; R. W. Dodgen, Local Agt.

Tex., Houston.—Southern Motor Manufacturing Assn.; erect warehouse; 75x150 ft.

Va., Norfolk.—M. and I. L. Brenner; erect \$20,000 warehouse, Walke and Cove Sts.; 75x80 ft.; 1 story; brick.

Va., Richmond.—United States Leather Co.; erect warehouse, 6th and Bainbridge Sts., South Richmond; 128x121 ft.

BUILDING CONTRACTS AWARDED

Apartment-Houses.

Fla., Sarasota.—Hazel Harrison; erect 2-story apartment-house, Palm Ave. and Mound St.; C. J. Knighton, Contr. (Lately noted.)

Fla., Sarasota.—Miss Hazel Harrison; erect apartment-house; contract let.

Fla., St. Petersburg.—Tampa Bay Grain Co.; erect second-story addition to warehouse, Central Ave., for rooming-house; Geo. Feltham, Archt.; Chas. Dubois, Contr.

Fla., Tampa.—Bay Shore Apartment Co., Asher Frank, Secy.; \$125,000 capital; erect

apartment-house, S. Brevard Ave. and Bay Shore Blvd.; 3 stories; F. J. Kennard, Archt.; Brogden, Ricketts & Haworth, Contrs.

N. C., Charlotte.—V. J. Guthery, representing interests; remodel Horner's Military College for apartments; \$160,000; 100 rooms; brick; gravel roof; wood over concrete floors; steam heat; electric lights; L. L. Hunter, Archt.; construction by Mr. Guthery. (Lately noted.)

Association and Fraternal.

D. C., Washington.—District Carpenters' Union, H. S. Hollahan, Prest.; erect \$100,000 hall; Waddy B. Wood, Archt.; 816 Connecticut Ave.; Andrew Murray, Contr., 729 12th St.; M. F. Keating Co., Colorado Bldg., heating.

Bank and Office.

Fla., Coconut Grove.—W. C. DeGarmo, Miami; prepared plans for \$15,000 bank building; Spanish architecture; 2-story vault; A. B. Wade & Son, Contrs.

Fla., Tampa.—First National Bank, Franklin and Madison Sts.; remodel banking-room; Franz Safe & Lock Co., Jacksonville, Contr. for vault work; Geo. W. Muller Bank Fixture Co., Atlanta, fixtures. (Lately noted.)

N. C., Mayworth.—Mays Mills Co., Stuart W. Cramer, Prest.; erect office building in connection with development of mill village; reinforced concrete; 2 and 3 stories; tapestry brick; terra-cotta finish; tile floors; marble wainscoting; also erect Bennett Hall for women, to contain reading-rooms, swimming pools, kindergarten, etc.; completing school building to accommodate 600, and erecting churches for Baptist and Methodist congregations and 2 dwellings; Charles C. Hook, Architect, Charlotte; portion of work let to following contractors: T. C. Thompson & Bro., R. L. Goode and J. P. Little & Son, all of Charlotte. (Lately noted in part.)

S. C., Charleston.—Enterprise Bank; enlarge building, Meeting and Market Sts.; \$25,000 to \$30,000; tile, cement and wood floors; Benson & Barbot, Archts.; National Show Case Co., Columbus, Ga., Contr. for interior fixtures, \$10,000; Waterfront & Foundation Co., Contr., Charleston. (Lately noted.)

Va., Danville.—Dr. Luther Robertson; erect 2-story brick addition to building, Main St., for office; \$10,000; L. B. Flora & Sons, Contrs.

Churches.

Fla., De Funiak Springs.—Presbyterian Church; erect \$40,000 building; heating and lighting, \$5000; Southern Construction Co., Contr., Pensacola.

N. C., Wilmington.—Church of the Covenant; erect \$175,000 Sunday-school building, gift of Mrs. W. R. Kenan; Norman-Gothic architecture; clubrooms and kitchen in basement; Kenneth Murchison, Archt., 101 Park Ave., New York; James F. Gause, Supv. Archt., Wilmington; Rhodes & Underwood, Contrs.; W. R. Doshier, plumbing fixtures; J. W. Blake, electrical equipment; all of Wilmington.

S. C., Charleston.—St. Philip's Episcopal Church, Rev. S. C. Beckwith, Rector; erect addition to building; choir bay, rector's rest-room, etc.; install organ; Simons & Lapham, Archts.; McCrady-Cheves Constr. Co., Contrs.

W. Va., Romney.—St. Stephen's Episcopal Church; erect rectory; John I. Vandegrift, Contr., Cumberland, Md. (Lately noted.)

W. Va., Wheeling.—St. Michael's Catholic Church; expend \$10,000 for improvements, Edgington Lane; 2-story addition to Sisters' Home; Porter-Betzer Co., Contr. (Lately noted.)

W. Va., Wheeling.—St. Michael's Catholic

Church, Edgington Lane; erect addition and improve building; Porter-Betzer Co., Contrs. (Lately noted.)

City and County.

Ala., Birmingham.—Fire Station.—City, John H. Taylor, Commr.; erect \$84,367 fire station, Sixth Ave., between 19th and 20th Sts.; 2 stories; frame; fireproof; 50x170 ft.; D. O. Whildin, Archt., Title Guarantee Bldg.; Smallman-Brice Constr. Co., Contrs.; Gamewell Fire Alarm Telegraph Co., Contrs. for fire-alarm system. (Lately noted.)

Ky., Lexington.—City, Wood C. Dunlap, Commr.; erect fire station, Merino and Maxwell Sts.; 2 stories; brick; 36x50 ft.; \$16,000; John V. Moore, Archt.; Clarke, Stewart & Wood Co., Contr. (Lately noted.)

Md., Baltimore.—Market.—Board of Awards, City Hall; install metal ceiling in center and side aisles Hollins Market; Henry Bensel & Son, 1820 Aiken St., Contrs. at \$6814; J. Frank Crowther, Building Inspector, City Hall. (Lately noted.)

Okl., Oklahoma City.—City; erect coliseum; J. W. Hawk, Archt.; Campbell & Price, Contrs.

Courthouses.

W. Va., Romney.—Hampshire County Commissioners; erect courthouse instead of remodeling building as planned; John I. Vandegrift, Contr., Cumberland, Md. (Lately noted.)

Dwellings.

Fla., Jacksonville.—O. P. Woodcock, Contr.; erect \$12,500 residence and garage, Elizabeth Place.

Fla., Miami.—Louis C. Tiffany, New York; erect \$30,000 to \$40,000 residence; 2 stories; octagon shape, 45 ft. each way; 8 rooms and 5 baths; J. E. Terwilliger, Archt.; Del E. Merrill, Contr.

Ga., Ty-Ty.—County Board of Education, Moultrie; erect \$15,000 school building; contract let. (Previously noted.)

Ky., Whitesburg.—David Hayes; erect number of dwellings; 24x34 ft.; metal ceilings; hardwood floors; plaster board; interior tile; metal doors; rolling partitions; ventilators; steel sash and trim; Wilse, Franklin & Sons, Contrs. Ave.

Md., Baltimore.—Mrs. Margaret Maddox, New York; erect \$20,000 residence, Wendover Rd., near Edwards Ave., Govans; 37x47 ft.; frame and concrete; slate roof; concrete and oak floors; vapor heat; electric lighting; interior tile; Geo. R. Callis, Jr., Archt., 611 American Bldg. Address E. Eyring & Sons, Contrs., 4205 Falt Ave.

N. C., Charlotte.—A. Collins; erect \$30,000 residence, Queens Road, Myers Park; Theis-Smith Realty Co., Contrs.

S. C., Pickens.—Pickens Mills, J. B. Hagood, Asst. Treas.; erect 5 dwellings; \$6000 each; bungalow type; wood construction; shingle roof; H. W. Hamilton, Contr., Easley, S. C. (Lately noted.)

Tex., Plainview.—J. H. Slaton, J. B. Maxey, E. M. Carter, Guy Jacob and D. Heffelfinger purchased 900 building lots and will erect dwellings; construct 25 immediately; Mr. Maxey, Contr.

Tex., San Antonio.—Walter Steve; erect \$30,000 residence; 30x63 ft.; 2 stories; sand limestone; colonial design; shingle roof; hardwood and tile floors; hot-air heat; Altee B. Ayres, Archt., Bedell Bldg.; Geo. Thomas, Contr.

Tex., San Antonio.—Dr. F. L. Thompson; erect \$85,000 residence; 2 stories and basement; hollow tile; brick face; concrete foundation; clay tile roof; hardwood, yellow pine and tile floors; hot-air heat; Altee B. Ayres, Archt., Bedell Bldg.; McKenzie Construction Co., Contr. (Lately noted.)

Va., Newport News.—Mrs. C. D. White, Brierfield Rd.; erect \$16,000 residence; J. J. O'Brien, Contr., 2610 Chestnut Ave.

Va., Newport News.—Charles Barclay, 3004 Washington St.; erect \$16,000 dwelling on James River; 2½ stories; 28x54 ft.; hollow tile and stucco; McKee & Williams, Archts., 225 28th St.; J. J. O'Brien, Contr., 2610 Chestnut Ave. (Lately noted.)

Va., Norfolk.—Graham Construction Co., Withers Bldg.; reported to have contract to erect 20 dwellings; 2 stories; 30x18 ft.; \$90,000.

Hospitals, Sanitariums, Etc.

Ga., Atlanta.—Georgia Baptist Hospital, Dr. J. M. Long, representative; erect \$1,000,000 hospital; nurses' home; 3 stories; 181x36 ft., with two wings, 69x37 ft.; structural steel, wood and brick; hospital building, 9 stories and basement; 200x96x41 ft.; reinforced concrete; \$50 beds; contemplate 3 units, first of 250 beds, with provision for 2 subsequent units of 300 beds each; entrance on north front and porch on east; first unit to contain food service, scientific departments, etc.; Burge, Stevens & Conklin, Archts., National City Bldg.; Dr. Hornsby, Const. Engr.; Turner Construction Co., Contr., Chamber of Commerce Bldg., Atlanta, and 244 Madison Ave., New York. (Previously noted.)

Hotels.

Md., Baltimore.—Hotel Caswell, Harry Pusick, Prop.; expend \$30,000 to alter building, including new dining-room; store front; changes in lobby, etc.; Wyatt & Nolting, Archts., Keyser Bldg.; J. Henry Miller, Inc., Contr., Miller Bldg., Eutaw and Franklin Sts. (Previously noted.)

Miscellaneous.

Tex., Beeville.—Fair.—Bee County Fair Assn.; erect grandstand; contract let; negotiating with Texas Gas & Electric Co. to install lights on grounds.

Railway Stations, Sheds, Etc.

Tex., Marshall.—Texas & Pacific R. R., E. F. Mitchell, Ch. Engr., Dallas; erect building for offices and pattern shop; 3 stories; brick, steel and concrete; 61x31 ft.; \$25,000 to \$30,000; Mayfield Building & Improvement Co., Cisco, Tex., Contr. on cost plus basis.

Va., Roanoke.—Virginian R. R., A. H. Chapman, Engr. of Structures, Norfolk; remodel freight station, S. Jefferson St.; \$35,000; John P. Pettijohn & Co., Contrs., Lynchburg.

Schools.

Fla., Miami.—Board of Public Instruction, R. E. Hall, Supt.; erect \$32,500 addition to Miami High School; H. Hastings Mundy, Archt., 135 11th St.; Smallridge & Foster, Contrs. (Lately noted.)

Ga., Savannah.—Board of Education, Careton B. Gibson, Supt.; erect junior high school; brick; 23 classrooms, gymnasium, auditorium, lunchrooms, shop, etc.; slate roof; concrete; rift-pine and linoleum floors; vacuum steam heat; electric lighting; ventilators; Wm. B. Ittner, Archt., Board of Education Bldg., St. Louis; H. S. McCrary, Jr., local representative, 114 W. Hull St., Savannah; Artley Co., Savannah, Genl. Contr. at \$339,529; Soder-

man Heat & Power Co., St. Louis, Contr. at \$39,877 for heating and ventilating; Eatman Plumbing Co., Albany, Ga., Contr. at \$17,450 for plumbing; Hardy Electric Co., Savannah, Contr. for lighting at \$11,829. (Lately noted.)

Md., Union Mills. — Board of Education; complete Union Mills-Silver Run school building; Israel Crouse, Contr., Littelton, Md.

Miss., Quitman.—Board of Education; erect \$35,000 high school; Peister & Wetmore, Contrs., Meridian.

N. C., Charlotte.—Mecklenburg County Board of Education, J. M. Matthews, Supt.; erect school building, Cowan Dist. No. 4, Deweese Township; 3 rooms; J. V. Knox, Contr.

Okla., Ardmore.—Board of Education; erect \$265,000 junior high school; 180x140 ft.; brick and stone; composition roof; concrete and wood floors; dual heating plant, \$46,000; city lights; J. B. White, Archt.; R. J. Ridpath, Contr. (Previously noted.)

Stores.

Fla., Ft. Myers. — Peter Tonneller; erect store and apartment building, Jackson and Oak Sts.; concrete block, faced with pressed brick; probably 3 stories; 46x97 ft.; W. E. Futral, Contr.

Fla., Jacksonville.—Kohn-Furchgott Co.; remodel stores; \$20,000; marquise, show windows, etc.; hardwood floors; plaster board; wire glass; H. J. Klutho, Archt. Address H. C. Buckland, Contr., 125 W. Adams St.

Fla., Jacksonville. — Kohn-Furchgott Co.; expend \$15,000 to remodel store, Bay and Main

Sts.; install fronts, marquee, etc.; H. C. Buckland, Contr.

Fla., Tampa.—Knight & Wall; erect \$20,000 addition on Jackson St.; brick; 3 stories; 30x140 ft.; \$20,000; also erecting 1-story brick storage building, Washington St.; \$8000; Logan Bros., Contrs.

Ga., Fitzgerald. — Wm. R. Bowen; erect 5 store buildings; 170x120 ft.; pressed brick; plate-glass front; contract let; 3 leased to Home Furniture Co.

La., New Orleans. — Mrs. Wm. J. Aleorn; erect \$16,164 building, Walnut General Hood, Wall and Audubon Sts.; John F. Charlton, Contr.

N. C., Winston-Salem.—James Smith; erect business block, 7½ and Depot Sts.; fireproof; 3 stories and basement; electric lighting; 3 stores on first floor; offices and apartments above; \$30,000; Smith & Hauser, Contrs.

Tex., Edinburg. — Henry Klossner, Prest. Edinburg State Bank; erect 1-story brick building, 12th St.; 100-ft. front; 4 storerooms; A. J. Ross, Contr.

Tex., Galveston.—Peter Gengler Co.; remodel store; \$20,000; 2 stories; 120x120 ft.; brick; composition roof; concrete and wood floors; Stowe & Stowe, Archts.; Wm. H. Janssen, Contr. (Lately noted.)

Tex., Galveston. — Clarke & Courts; alter buildings; L. S. Green & Co., Archts., Houston; W. H. Janssen, Contr., Galveston. (Lately noted.)

N. C., Greensboro.—Bijou and Victory Theaters, Roland Hill, Mgr.; expend \$60,000 for improvements; C. K. Howell, Archt., Atlanta; L. B. Flora & Son, Contrs., Danville, Va.

Theaters.

Md., Baltimore. — Castro Constantine, 2820 Guilford Ave.; erect moving-picture theater, 1500 Harford Ave., for Apollo Theater Co.; 1 story; 63x125 ft.; brick; Guilford Building Co., Contr., 1308 Fidelity Bldg.

Tex., Austin.—Geo. W. Littlefield; erect \$250,000 theater; 2 to 4 stories; concrete and brick; metal roof; hardwood, tile, concrete floors; Walsh & Gieseke, Archts., Austin; Harrison & Co., Contrs., Waco.

Warehouses.

Ala., Birmingham.—Wertheimer Bag Co., 2408 3d Ave. N.; erect \$28,000 warehouse, N. 10th Ave. and 22d St.; 200x200 ft.; tile; L. J. Morris, Contr.

Fla., Jacksonville.—Standard Oil Co.; erect \$20,000 warehouse, 1st St., near 6th.; 50x200 ft.; 1 story; O. P. Woodcock, Contr.

Fla., Tampa.—Knight & Wall; erect storage building. (See Stores.)

Md., Baltimore.—National Building Supply Co., North Ave. and Oak St.; erect warehouse, Garrison Lane; frame; 60x210 ft.; 20 ft. high; 1 story; J. Henry Smith, Contr., 1426 Light St.; construct railroad siding, etc.; \$150,000.

Okla., Shawnee.—Clarke & Keller Seed Store; erect \$35,000 warehouse and seed-cleaning building; 40x41 ft.; basement; brick and reinforced concrete; concrete and asphalt roof; concrete floor; Jones-Hettelsater Construction Co., Contr., Kansas City, Mo. (Lately noted.)

Tex., Ft. Worth.—Northwest Compress Co.; erect \$170,000 warehouse, Cold Spring Rd.; concrete; 140,000 sq. ft. of floor space; W. C. Hedrick Construction Co., Contr.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Bakery Equipment.—H. J. Young, Beaufort, S. C.—Prices on bakery equipment and data as to operation.

Billiard Supplies.—Fred E. Mountcastle, 3005 Washington Ave., Newport News, Va.—Names and addresses foreign mfrs. billiard supplies, including cloth, tips and chalk.

Bits (Auger).—H. A. Cook, Belver Ave., Charlotte, N. C.—Names and addresses mfrs. of auger bits.

Boiler.—R. A. Zoeller, Box 474, Washington, N. C.—Data and prices on second-hand vertical or Scotch marine boiler.

Boilers.—Kelly Drydock & Shipbuilding Co., Conti and Commerce Sts., Mobile, Ala.—Boilers for machine shop to repair ocean steamers.

Boilers.—J. T. Dudley, Athens, Ga.—Two 150 H. P. return-tubular boilers.

Bottles.—L. T. Smith, Oneida, Tenn.—Prices on milk bottles; immediate delivery.

Bottles.—John G. Duncan Co., Central and Jackson Sts., Knoxville, Tenn.—Dealers' prices on milk bottles; carload lots.

Boxes.—Andrea Scaglione, 1816 9th Ave., Ybor City, Tampa, Fla.—Names and addresses mfrs. macaroni boxes.

Brick Machinery.—G. T. Harris, Treas., Raleigh-Wyoming Coal Co., Charleston, W. Va.—Equipment to mfr. bricks from shale, probably requiring grinding equipment; daily capacity 30,000.

Brick Machinery.—S. S. Dixon, Fayetteville, N. C.—Names and address mfrs. brick machinery.

Boiler Plant.—Navy Dept., Bureau Yards and Docks, Washington, D. C.—Bids until Aug. 25; improve boiler plant at Navy-yard, Charleston, S. C.; Spec. No. 4252.

Bridge Construction.—Doddridge County Court, Hiram Hutson, Clk., West Union, W. Va.—Bids until Aug. 27; construct concrete bridge over McElroy Creek; 80-ft. span; 384 cu. yds. concrete; concrete slab bridge over Ragan's Run; 20 ft.; 14-ft. way; 70 cu. yds. concrete; plans, etc., on file with County Engrs.

Bridge Construction.—Harrison County Commrs., J. James Crews, Clk., Clarksburg, W. Va.—Bids until Sept. 7; construct 10 bridges in Simpson, Tenmile and other districts; plans on file with County Road Engr.

Bridge Construction.—Mercer County Court, Lowery G. Bowling, Clerk, Princeton, W. Va.—Bids until Sept. 2; construct 10 ft. span concrete girder bridge across Rich Creek at Spanishburg, W. Va.; plans on file with Barton, County Road Engr., McNutt Bldg., Princeton, W. Va.

Bridge Construction.—Comsn. of Roads and Bridges, 414 New Kirn Bldg., Portsmouth, Va.—Bids until Aug. 16; construct Western Branch bridge over Elizabeth River.

Bridge Construction.—Board of Awards, Baltimore, Md.—Bids until Aug. 18; construct Windsor Mill road bridge over Gwynn's Falls and approaches; plans, etc., on file; A. E. Christliff, Highways Engr.

Bridge Construction.—Bonham Red River Bridge Co., Sid Smith, Secy., Bonham, Tex.—Bids until Aug. 23; construct highway bridge across Red River; four 185½-ft. steel spans; 150-ft. roadway; concrete and wood floors; reinforced concrete and steel cylinder piers; earth embankment approaches; plans, etc., on file with Secy., Bonham, and Harrington, Howard & Ash, Conslt. Engrs., Kansas City, Mo.

Box Machinery, etc.—Doutglas Novelty Co., A. L. Day, Mgr., Irwin St., Douglas, Ga.—Data and prices on box and crat. mch.

Bridge Construction.—Whitfield County Commrs., Roads and Revenues, H. J. Wood, Clerk, Dalton, Ga.—Bids until Aug. 13; construct bridge across Bear Creek; plans, etc., on file in office of Ordinary.

Bridge Construction.—Coweta County, Commrs. Roads and Revenues, T. G. Farmer, Jr., Clerk, Newnan, Ga.—Bids until Aug. 19; construct 390 lin. ft. concrete bridges on Newnan-Griffin road; Federal-aid Project No. 134; plans, etc., with Commrs. and H. G. Smith, Div. Engr., Lagrange, Ga., or State Highway Dept., 700 Walton Bldg., Atlanta, Ga.

Bridge Construction.—Doddridge County Court, Hiram Hutson, Clerk, West Union, W. Va.—Bids until Aug. 19; construct 80-ft. span concrete bridge over McElroy Creek near Eagle Mills; 384 cu. yds. concrete; plans with County Engrs., West Union; Div. Engrs., Morgantown, W. Va., or State Road Comsn., Charleston, W. Va.

Brick Machinery.—S. S. Dixon, Fayetteville, N. C.—Names and addresses mfrs. brick machinery.

Broom Machinery.—Frank M. Miglis, 273 Clinton St., Brooklyn, N. Y.—Names and addresses mfrs. broom mch.

Broom Machinery.—G. W. Grainger, Phil Campbell, Ala.—Broom machinery.

Bronze, Brass, etc.—Panama Canal, A. L. Flint, Gen. Purchasing Officer, Washington, D. C.—Bids until Aug. 26 to furnish: Bronze, brass, steel, iron, manganese castings; pig-iron; cast-iron pipe; steel and bronze rope; steel wire; pipe tees; bolts; nuts; rivets;

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

lead washers; copper; brass tubing; cuspidors; grommets; latches; locks; steel tapes; vises; wrenches; electric switches; anchors; binnacles; tarred felt; life preservers; oars; chalk line; manila rope; twine; file handles; fire brick; lime; antimony; ferrotitanium; pitch; varnish; lumber; millwork, etc. Blank forms and information (Circular 1396) on application to offices of: Panama Canal; Asst. Purchasing Agents at New York, New Orleans, San Francisco; United States Engr. offices throughout country.

Building Materials.—American Motors Export Co., J. R. Pratt, Prest., Jacksonville, Fla.—Prices on building materials.

Cannery Equipment.—Chamber of Commerce, W. C. Denmark, Secy., Goldsboro, N. C.—Names and addresses mfrs. cannery equipment.

Cars.—Henry C. Morrison, 112 8th St., Augusta, Ga.—Six 36 or 42-in. gauge flat cars or trucks on which to build flats.

Cars.—White Horse Coal Co., Flemington, W. Va.—Prices on fifty 2-ton mine cars, 42-in. gauge, second-hand; delivery at Berryburg, W. Va.

Cars, etc.—J. A. DeCruz, Overseas Commercial Representative, 3 Bedfordbury Strand, London, England.—To represent manufacturers of: Cars; lorries; labor-saving devices; hardware; machinery; oilman stores; confectionery; toilet goods; ironmongery; haberdashery; leather goods; copra; ground nut; ginseng; tea; coffee; rubber; cavi; jute and other fibers; pepper; cinnamon; spices; coconut; citronelle, vanilla, mica, etc.

Car Trucks.—Sugar Products Co., 56 Pine St., New York.—Names and addresses mfrs. car trucks.

Cement, etc.—Behari Lal Maheshwary & Co., Amritsar, India.—To represent mfrs. of and dealers in: White cement; cement; tiles; tile mch.; hardware; hosiery; dyes, etc.; catalogues and lowest quotations £. I. f. Karachi.

Coal.—High Point Machine Works, Shelby E. Corbitt, Sales Engr., High Point, N. C.—Carload lump coal; delivery in September.

Compressors.—Kelly Drydock & Shipbuilding Co., Conti and Commerce Sts., Mobile, Ala.—Air compressors for machine shop.

Culvert.—John Sutherland, County Auditor, Marlin, Tex.—Prices on 48-in. 16-ft. long pure iron culvert; delivery Marlin.

Cutter (Veneer).—Douglas Novelty Co., A. L. Day, Mgr., Irwin St., Douglas, Ga.—Data and prices on veneer cutter.

Cutter (Wood).—D. D. Roberts, Roberts Auto Appliance Co., Perry, Fla.—To contract for mfr. Roberts auto appliance tree and wood cutter.

Drainage Construction.—Spalding County Commrs., Drainage Dist. No. 1, J. P. Durkee, Secy., Griffin, Ga.—Bids until Aug. 21; dredge Troublesome Creek; main ditch 6.6 mi.; 137,420 cu. yds.; plans on file or with Cecil L. Fife, Engr., Fayetteville, Ga.

Drainage System.—Hickman County Drainage Commrs., H. M. Cressap, Prest., Clinton, Ky.—Bids until Aug. 20; construct drainage system in Brush Creek Dist., Hickman and Graves counties; main canal 48,200 ft. long; 3 laterals 3300 ft. long; 291,708 cu. yds. excavation; 5 wooden bridges; plans, etc., with Commrs. and J. A. Porter, Engr. (Supercedes recent item.)

Drill (Steam).—J. O. McDermitt & Sons, Contrs., Ambrosia, W. Va.—Second-hand steam drill; state condition and price.

Electrical Equipment.—American Motors Export Co., J. R. Pratt, Prest., Jacksonville, Fla.—Prices on electrical equipment.

Electric-light Plant.—Kelly Drydock & Shipbuilding Co., Conti and Commerce Sts., Mobile, Ala.—Prices on 200 K. W. direct-connected electric-light plants.

Engineering, etc.—K. B. Sen & Sons, Calcutta, India.—Engineering, electrical and mechanical representation.

Engines.—Kelly Drydock & Shipbuilding Co., Conti and Commerce Sts., Mobile, Ala.—Engines for machine shop to repair ocean steamers.

Gasoline.—Panama Canal, A. L. Flint, Gen. Purchasing Officer, Washington, D. C.—Bids until Aug. 17 to furnish gasoline. Blank forms and information (Circular 1397) on application to offices of: Panama Canal; Asst. Purchasing Agents at New York, New Orleans, San Francisco; United States Engr. offices throughout country.

Generator Set.—Southwestern Battery Co., F. B. Vonder Hoya, Secy.-Treas.-Mgr., 1707 Jackson St., Dallas, Tex.—Bids for 150-ampere 100-volt motor generator set.

Grader (Road).—John Sutherland, County Auditor, Marlin, Tex.—Prices on 10-ft. road grader with engine hitch, 25-ft. cable, auxiliary blade lift complete; delivery Marlin.

Ice-cream Equipment.—H. J. Young, Beaufort, S. C.—Prices on ice-cream equipment and data as to operation.

Ice-cream Freezer.—Perry-Mann Electric Co., W. M. Perry, Prest., Columbia, S. C.—Names and addresses mfrs. 4-qt. ice-cream freezer; 110-volt single-phase 60-cycle motor directly attached.

Ice Plant.—Violet Ice & Electric Co., Evi Vaughan, Prest., Violet, La.—Prices on new or second-hand 15 to 20 raw-water ice plant; with or without crude oil engine.

Jointer.—R. A. Zoeller, Box 474, Washington, N. C.—Data and prices on second-hand 8, 10 or 12-in. jointer.

Laundry Equipment.—H. J. Young, Beaufort, S. C.—Prices on laundry equipment and data as to operation.

Locomotive.—Henry C. Morrison, 112 8th St., Augusta, Ga.—36 or 42-in. gauge steam locomotive, wood burner.

Locomotives.—C. Endsley, Prest., Uvalde and Northern Ry. Co., 317 Kampmann Bldg., San Antonio, Tex.—Three locomotives, 65 to 75 tons; coal burners.

Machine Tools.—Kelly Drydock & Shipbuilding Co., Conti and Commerce Sts., Mobile, Ala.—Machine tools, including lathes, drills, planers, steam hammers, pipe-threading tools.

Machine Tools.—Cyclone Starter & Truck Co., Box 858, Greenville, S. C.—Machine tools, including 16-in. by 8-ft. screw-cutting engine lathe; milling machine, arbor and vise, single pulley change gears; 25-in. sliding-head drill press with lever and power feed; 3-ft. radial drill press; 16-in. shaper; 11-in. by 5-ft. speed lathe and countershaft; 16-in. disc grinder; 12-in. polishing lathe; motor-driven tool grinders for 6-in. wheels; 9x9-in. power hacksaw; 14-in. wet tool grinder, No. 2 arbor press, etc.; complete list on file with Manufacturers Record.

Mining Machinery.—Harmon & St. Clair, Noel, Mo.—Mining machinery for lead and zinc.

Oil-extracting Machinery.—M. R. Cole, Civil Engr., Noel, Mo.—Machinery to extract oil from shale; 400 acres.

Overall Machinery.—Anderson-Seay Co., Pascagoula, Miss.—Names and addresses mfrs. overall machinery.

Paving.—Town of Lecompte, La., W. H. Jones, Mayor Pro Tem.—Construct combined curbing and gutter on Wall St.; pave sidewalks with concrete on St. Charles, Ford and

Bank Sts. and Rapides Ave.; plans on file with Town Clerk and Engr.

Paving.—City of Huntington, W. Va., Matt Miser, Commr. of Streets and Sewers.—Bids until Aug. 14; pave 6th St. from 10th to 11th Ave.; alley between 12th and 13th Aves., 9th and 10th Sts.; plans with A. B. Maupin, City Engr.

Painting.—City of Baltimore, Md., Board of Awards.—Bids until Aug. 18; painting stand pipes; plans with Wm. A. Megraw, Water Engr., City Hall.

Paving.—Baltimore (Md.) Board of Awards. Bids until Aug. 18; pave section of Lauretta, Wheeler, Warwick and other avenues; Contract No. 178; 10,000 sq. yds. sheet asphalt, 3000 lin. ft. armored concrete curb, 350 sq. yds. vitrified brick gutter, 1500 lin. ft. combination curb and gutter and 3800 cu. yds. grading; specifications from Commrs. for Opening Streets, John H. Robinette, Prest., City Hall.

Paving.—Town of Wilson, N. C., D. H. Hill, Mayor.—Bids until Sept. 1; 75,000 sq. yds. asphaltic, sheet asphalt, bitulithic or Topeka pavements; 75,000 sq. yds. concrete base; 17,000 cu. yds. excavation; 46,500 lin. ft. concrete curb and gutter; plans, etc., from Gladding, Morrison & Ott, Engrs.

Piping.—Frontier Oil Co., Alexander Boynton, Prest.-Engr., 1018 Central Trust Bldg., San Antonio, Tex.—Six 5/8-in. 19 to 24 lbs. oil-well casing.

Plumbing.—Treasury Dept., Jas. A. Wetmore, Act. Supervising Archt., Washington, D. C.—Bids until Aug. 31 for toilet-rooms in U. S. Marine Hospital, St. Louis, Mo.; copies of drawings and specifications from Custodian at St. Louis or from office Supervising Archt.

Rails.—Henry C. Morrison, 112 8th St., Augusta, Ga.—2 mi. 20 to 30-lb. rails.

Rails.—White Horse Coal Co., Flemington, W. Va.—Prices on 40 tons second-hand 20-lb. rails; delivery Berryburg, W. Va.

Road Construction.—Mercer County Court, Lowery G. Bowling, Clerk, Princeton, W. Va. Bids until Aug. 10; shale surface 20 ml. Durhing-Goodwill road; plans with Elmer C. Barton, County Road Engr., McNutt Bldg.

Road Construction.—Concordia Parish Police Jury, Vidalia, La.—Bids until Sept. 4; construct 18 ml. Ferriday-Jonesville Highway, west to Parish line; plans, etc., on file.

Road Construction.—State Highway Commission, Columbia, S. C.—Bids until Sept. 21; construct roads in Dorchester County, S. C.; \$200,000; Klutitz & Smith, Engrs., Concord, N. C.

Road Construction.—Kanawha County Commrs., Charleston, W. Va.—Bids until Aug. 14; grade 36.9 ml. road in Cabin Creek Dist.; voted \$904,000 bonds.

Road Construction.—State Highway Commission of Alabama, Montgomery, Ala.—Bids until Aug. 31; construct 3.2 ml. road in Dallas County from Brown's Station to Perry County line; 12,672 cu. yds. excavation; plans on file or with Div. Engr., Selma, Ala.; W. S. Keller, State Highway Engr.

Road Construction.—City Commrs., San Antonio, Tex.—Bids until Aug. 13; pave and curb Drexel Ave.

Road Construction.—City of Ashland, Ky., W. A. Manning, Clerk.—Bids until Aug. 16; changed date from July 5; pave Winchester Ave.; plans on file.

Road Construction.—Randolph County Commrs., Thaddeus Pritt, Clerk, Elkins, W. Va.—Bids until Aug. 26; construct 5 1/2 ml. Staunton and Parkersburg road; 2 mi. Seneca Pike road; 4 1/2 ml. District road; grading and

(Continued on Page 148)



Meeting a Crisis

This era of under-production—to which are attributed currency inflation, high commodity prices and economic conditions in general—is ascribed by astute students of industry to the post-war shortage of transportation facilities.

Traffic congestion entails interrupted and uncertain flow of manufacturing materials. This in turn prevents the maintenance of production schedules. It breaks down systematic, carefully planned, economical manufacturing methods. In consequence, production costs are increased.

The situation cannot but grow worse unless the railroads are helped to operate their inadequate facilities at high efficiency. Every auxiliary means of transportation must be utilized to the fullest extent. Motor trucks must, more and more, be called upon to avert a disastrous breakdown.

Keep the Traffic Moving

Diamond T Motor Car Co.

Builders of "The Nation's Freight Car"

4528 W. 26th St.



Chicago, Illinois

drainage; plans with F. A. Parsons, County Engr. and State Road Comsn., Charleston, W. Va.

Road Construction.—Baltimore (Md.) Board of Awards.—Bids until Aug. 18; repair roads at Loch Raven; specifications and proposal forms from Wm. A. Megraw, Water Engr., City Hall.

Road Construction.—Highway Dept., State Engineers, 332 Maison Blanche Annex Bldg., New Orleans, La.—Bids until Aug. 30; construct 7.82 mi. Alexandria-Colfax Highway, Rapides Parish; plans, etc., on file; Duncan Baile, State Highway Engr.

Road Construction.—City of Denton, Tex., J. W. Erwin, Secy.—Bids until Aug. 17; pave N. Locust St. from square to College St., W. Oak St. from square to city limits; combined concrete curb and gutters; storm sewers; 50,000 sq. yds. pavement; plans on file or with Kosh & Fowler, Conslt. Engrs., Dallas, Tex.

Road Construction.—Randall County, C. R. Fleisher, Judge, Canyon, Tex.—Bids until Aug. 18; grade 17.03 mi. on State Highway No. 33; concrete culverts; 6538 cu. yds. excavation; 15,000 lbs. reinforcing steel; Federal aid; plans on file or with Nagle-Witt-Rollins Engineering Co., Engr., Dallas, Tex.

Road Construction.—Williamsburg County Comms., Kingstree, S. C.—Bids until Aug. 19; construct 8.504 mi. Manning-Kingstree road between Clarendon County line and Survey Sta. 183/50; bridge and sand-clay surface same road between Clarendon County line and Black River; 43,000 cu. yds. excavation; 26,135 cu. yds. sand-clay surfacing; 2587 lbs. steel reinforcements; 76,506 ft. B. M. creosoted lumber; 925 sq. yds. bituminous wearing surface, etc.; plans with J. M. Martin, County Engr., Kingstree; W. S. Lewis, Div. Engr., Florence, S. C.

Road Construction.—Coacoria Parish Police Jury, Vidalia, La.—Bids until Sept. 4; construct 12 mi. Vidalia-Deer Park highway; plans, etc., on file.

Road Construction.—Gilmer County Commissioners, Glenville, W. Va.—Bids until Aug. 24; grade 5 mi. on Glenville-Weston road; \$25,000.

Road Construction.—Bladen County Commissioners, W. H. Grimsley, Chrmn., Council, N. C.—Bids until Aug. 16; construct 12-mi. sand-clay road; plans on file with W. H. Banck, Engr., Wilmington, N. C.

Road Construction.—State Highway Commission, Div. Engr., Greensboro, N. C.—Bids until Aug. 25; construct 5 mi. highway in Alleghany County; 34,730 sq. yds. water-bound macadam; 49,530 cu. yds. excavation; 1330 lin. ft. 15 to 18-in. corrugated iron pipe; specifications, etc., from State Highway Comsn., W. S. Fallis, Engr., Raleigh; plans on file with Div. Engr., Greensboro.

Road Construction.—State Highway Commission, Div. Engr., Greensboro, N. C.—Bids until Aug. 25; construct 4.54 mi. highway in Davidson County; 11,870 cu. yds. top-soil surfacing; 29,400 cu. yds. excavation; 824 lin. ft. 12-24-in. terra-cotta pipe; 85,600 lbs. reinforcing steel and 600 cu. yds. concrete for bridges and culverts; specifications, etc., from State Highway Comsn., W. S. Fallis, Engr., Raleigh; plans on file with Div. Engr., Greensboro.

Road Construction.—State Highway Commission, Div. Engr., Greensboro, N. C.—Bids until Aug. 25; construct 10.04 mi. highway; 26,310 cu. yds. top-soil surfacing; 54,900 cu. yds. excavation; 2204 lin. ft. terra-cotta pipe; 51,500 lbs. reinforcing steel and 495 cu. yds. concrete in bridges and culverts; specifications, etc., from State Highway Comsn., W. S. Fallis, Engr., Raleigh; plans on file with Div. Engr., Greensboro.

Road Construction.—State Highway Commission, Div. Engr., Greensboro, N. C.—Bids until Aug. 25; construct 20.53 mi. highway in Moore County; 53,800 cu. yds. top-soil surfacing; 3742 lin. ft. 15-24-in. corrugated iron pipe; 97,570 cu. yds. excavation; specifications, etc., from State Highway Comsn.; W. S. Fallis, Engr., Raleigh; plans on file with Div. Engr., Greensboro.

Saw (Band).—R. A. Zoeller, Box 474, Washington, N. C.—Data and prices on second-hand 30x36-in. band saw.

Sawmill.—Ritter Hardwood Lumber Co., 1111 First National Bank Bldg., Huntington, W. Va.—Sawmill equipment.

Scales.—Alabama Coal Co., Box 1934, Tulsa, Okla.—Prices on platform wagon truck scales; would consider track scales for weighing loaded cars.

Scrapers.—John Sutherland, County Auditor, Marlin, Tex.—Prices on 12 No. 2 drag scrapers D. B.; delivery Marlin.

Sewage-disposal Equipment.—Board of Awards, Baltimore, Md.—Bids until Aug. 18; construct hydrolytic tank No. 4, sludge digestion tank, pipe lines and appurtenances at sewage-disposal works; 262,000 lbs. reinforcing rods; 42,800 sq. ft. expanded metal; 21 gate valves and sluice gates; 536 lin. ft. cast-iron pipe; two 12-in. and ten 24-in. circular sluice gates; also construct 4 ash conveyor fillers, coal-weighing and valve-operating platforms at sewage pumping station, Eastern Ave. and President St.; plans, etc., from Div. Engr. of Sewers, City Hall Annex No. 1; H. G. Perring, Ch. Engr.

Sewers.—Town of Wilson, N. C., D. H. Hill, Mayor.—Bids until Sept. 1; extend sewer system; improve streets; construct 42,000 lin. ft. sanitary and storm sewers; 110 manholes; 200 catch-basins; plans, etc., from Gladding, Morrison & Ott, Engrs.

Sewers.—Board of Awards, Baltimore, Md.—Bids until Aug. 18; extend Syoney Run trunk sewer at University Parkway; 162 lin. ft. 18-in. vitrified pipe sewer; 2 manholes; plans, etc., from Div. Engr. of Sewers, City Hall Annex No. 1; H. G. Perring, Ch. Engr.

Shingles (Asbestos).—Fowler-Flemister Coal Co., Milledgeville, Ga.—Names and addresses mfrs. of asbestos shingles.

Springs (Coil).—Warren O. Cool, 33 5th St., Morgantown, W. Va.—Names and addresses mfrs. coil springs.

Steel Buildings.—R. A. Zoeller, Box 474, Washington, N. C.—2-story 110x100-ft. and 100x70-ft. steel buildings, with one end open, one side without openings; lower floor for transportation warehouse, second for recreation hall; new or second-hand; catalogues and description.

Sorghum Mill.—C. C. Davis, Box 291, Hopewell, Va.—Sorghum mill to mfr. small quantity of molasses; location, on farm between Memphis and Nashville, Tenn.

Textile Equipment.—Continental Tire & Cotton Co., S. M. Strange, Prest., Stamford, Tex.—Bids about Nov. 1 for equipment, to include 15,000 or more spindles.

Textile Equipment.—Joe E. Webb, County Atty., Madisonville, Tex.—Correspondence relative to establishment cotton and woolen mill; include data and prices on equipment, etc.

Tinplate, etc.—Papapetros & Ortolani, Rue Bab El-Rha, Casablanca, Morocco.—To represent manufacturers of and dealers in: Tinplate; brass; copper; windmills; hardware, etc.

Tire Machinery.—Rossel Edward Mitchell & Co., H. G. Tyrrell, Engr., Norfolk, Va.—Machinery or other equipment to rebuild old rubber tires or make new tires from old.

Trucks.—R. A. Zoeller, Box 474, Washing-

ton, N. C.—Data and prices on bull or roller-bearing warehouse and factory trucks.

Tubing.—Frontier Oil Co., Alexander Boynton, Prest.-Engr., 1018 Central Trust Bldg., San Antonio, Tex.—2-in. 4½ to 5 lb. tubing.

Water-works.—Town of Wilson, N. C., D. H. Hill, Mayor.—Bids until Sept. 1; extend water system; lay 13,700 lin. ft. 6-in. class B water mains; plans, etc., from Gladding, Morrison & Ott, Engrs.

Woodworking Machinery.—H. G. Teat, care of Samson Casket Co., Samson, Ala.—Woodworking machinery.

Woodworking Machine.—Palm Craft Co., 5th and 6th Aves., Tampa, Fla.—Machine for cutting off thin slices of palm stems which are a spongy wet soft wood.

Woodworking Machinery.—L. F. Seyfert's Sons, 437 N. 3d St., Philadelphia, Pa.—Woodworking machinery, including planers, sanders, jointers, moulders, band, jig and circular saws; will buy entire plants or single machines for cash.

Railroad Construction

Railways.

Ala., Wetumpka.—The Ark-Ala Lumber Co. has let contract to J. N. Gillis & Son of Brewton, Ala., to build 12 mi. standard-gauge railroad to the company's virgin long-leaf pine tract on the Tallapoosa River.

Ga., Thomasville.—Atlantic Coast Line is reported to have let contract to the Cornell-Young Co. for a \$50,000 job, including grading of yard addition, laying 3 mi. of tracks and relaying 2 mi. of tracks.

La., Monroe.—Arkansas & Louisiana-Missouri Railway Co. incept. to take over, improve and probably extend the Arkansas & Louisiana Midland Railroad purchased by E. A. Frost, F. T. Whited and G. S. Prestridge of the Frost-Johnson Lumber Co., Shreveport, La. Capital stock \$1,000,000, of which \$600,000 is paid in. Prest., E. A. Frost; 1st V.-P., F. T. Whited; 2d V.-P., G. S. Prestridge; active V.-P., C. W. Nelson. Officers of the inceptrs. are J. M. Booze, C. A. Barbour, J. S. Cullinan, F. G. Hudson, Thomas E. Flournoy and P. M. Atkins.

Md., Baltimore.—Pennsylvania Railroad proposes to spend \$350,000 for enlarging its yards at Canton, Baltimore. Geo. M. Smith, Baltimore, is Div. Supt.; A. C. Shand, Philadelphia, Pa., is Ch. Engr.

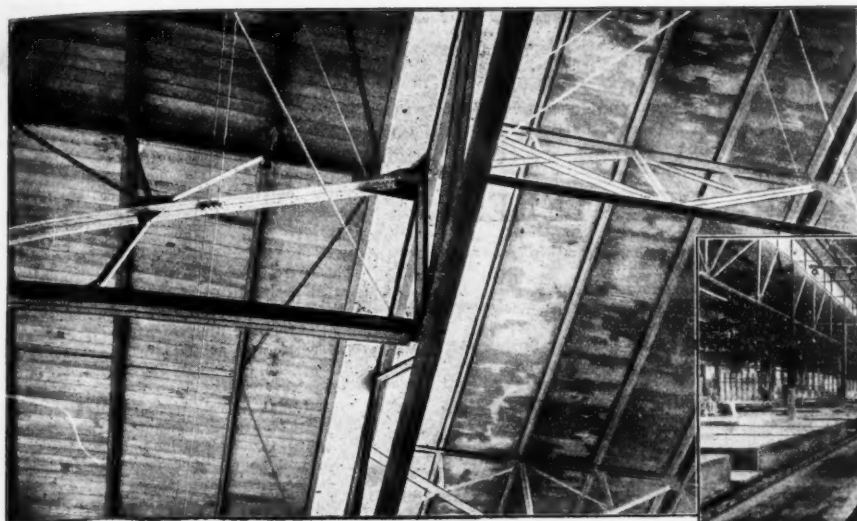
N. C., Sylva.—Blackwood Lumber Co., Inc., of Roanoke, Va., with offices also at Sylva, will build 20 mi. of railroad to develop from 50,000 to 150,000 acres of timber lands. Cox & Son, Engrs. Contract for 15 mi. let to the Luck Company of Harlan, Ky., with offices also at Sylva.

Okla., Oklahoma City.—Increased fares granted the Oklahoma Railway by the City Commission will be followed, according to a statement quoting J. W. Shartel, president of the company, by the execution of plans for elevated railway lines for suburban and interurban routes into the city, with perhaps a subway.

Okla., Oklahoma City.—Missouri, Kansas & Texas Rwy. Co. plans construction of freight cut-off 2 mi. long and enlargement of yards at Osage. F. Ringer, St. Louis, Mo., is Ch. Engr.

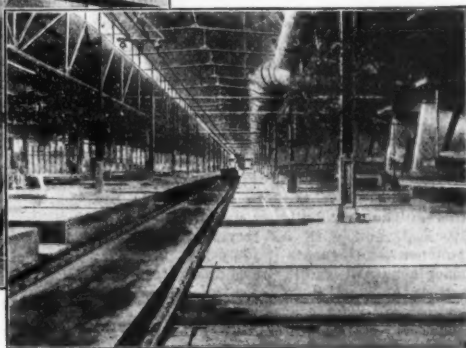
Tenn., Collinwood.—Bids for construction of 17 mi. standard-gauge industrial railroad from Collinwood northward are being invited immediately by Tennessee Charcoal Iron Co.

(Continued on Page 150)



Carbosoted sheathing in place at left, and disintegrating cement ceiling at right.

General view of polishing-room of large plate-glass works. Carbosoted sheathing being placed at left.



Another Lesson in Wood Preservation—

THE economy of creosoted wood for roof-deck construction, wherever abnormal humidities prevail, is strikingly shown by the recent experience of a large plate-glass manufacturer.

The roof-deck of the glass factory was reinforced concrete. Shortly after operations were begun in the plant, it was discovered that humidity was causing the cement ceiling to disintegrate. Chips of cement fell from the ceiling of the polishing-room, doing serious damage to glass undergoing the finishing process.

To cure this condition it was necessary to sheath the roof-deck—an area of over 200,000 square feet. The sheathing (1" x 6" boards) and the stringers (2" x 4" scantling) were cut to size, treated with Carbosota Creosote Oil, assembled into sections and the sections bolted to the trusses. This has proved a very satisfactory solution of the difficulty.



But if, in the first place, the roof-deck had been built of carbosoted lumber of proper thickness, much of the construction cost would have been saved, and the loss in the polishing-room caused by falling cement would have been entirely avoided.

As wood causes minimum condensation, it is the most satisfactory structural material wherever excessive humidities exist. When

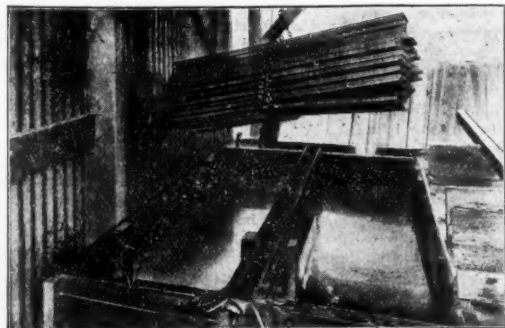
the lumber is protected from decay by preservative treatment, it becomes also the *most durable* and *most economical* material that can be used. This applies with special emphasis to paper, textile, starch and copper stamp mills.

Carbosota Creosote Oil is the standard wood preservative for all non-pressure treatments.

When the Open Tank process can be conveniently employed, this method is recommended. If the Open Tank treatment is not practicable, however, Surface application with brush or spray will prove a decided economy.

If you will write for Special Folder No. 408, entitled "Preserving Wood Roof Decks with Carbosota," copy will be sent free of charge.

(Green wood cannot be effectively creosoted by non-pressure process. It should be seasoned. In regions of moist, warm climate, wood of some species may start to decay before it is completely air-dry. Exception should be made in such cases, and treatment modified accordingly.)



Creosoting sheathing by the Open Tank process with Carbosota Creosote Oil.

The Barrett Company

| | | | | |
|-------------------------------|-----------------|----------------|-----------|---------------|
| New York | Chicago | Philadelphia | Boston | St. Louis |
| Cleveland | Cincinnati | Pittsburgh | Detroit | New Orleans |
| Birmingham | Kansas City | Minneapolis | Dallas | Nashville |
| Syracuse | Seattle | Peoria | Atlanta | Duluth |
| Salt Lake City | Bangor | Washington | Johnstown | Lebanon |
| Youngstown | Milwaukee | Toledo | Columbus | Richmond |
| Latrobe | Bethlehem | Elizabeth | Buffalo | Baltimore |
| THE BARRETT COMPANY, LIMITED: | | | | |
| Vancouver | St. John, N. B. | Montreal | Toronto | Winnipeg |
| | | Halifax, N. S. | | Sydney, N. S. |

Tex., Uvalde.—Uvalde & Northern Railway Co. let contract to the L. J. Smith Construction Co. to build 40 mi. line from Uvalde northward to Camp Wood, and 6 mi. industrial tram road. Line includes 8 wooden bridges, but no river crossing. Directors: C. Endsley, Pres.; Will A. Morris, V. P.; W. A. Thomson, Secy.; J. F. Halpin, J. Warren Halpin, B. L. Endsley and U. S. Pfeuffer,

of San Antonio, Tex.; J. F. Halpin's address 317 Kampmann. H. E. Board is Chief Engr. and Homer Rogers, Treas.

Street Railways.

Va., Norfolk.—Virginia Railway & Power Co. has been authorized by the city to build two connecting tracks.

present complete line of hydraulic and power machinery a full line of pneumatic and hydro-pneumatic riveters and foundry molding machines.

Department Enlarged.

The electrical department of the High Point Machine Works, Inc., High Point, N. C., will be under the direction of Mr. Lee Overman after August 15. The department has been greatly enlarged and a force of experts added.

Fuel-Saving Instruments.

The scarcity of fuel, its high price and the general desire to exercise economy in its use make especially interesting the announcement that the Uehling Instrument Co., 71 Broadway, New York, will exhibit their fuel-saving devices at the Chemical Show, Grand Central Palace, New York, September 20 to 25, and at the National Association of Stationary Engineers' Convention, Milwaukee, Wis., September 13 to 17. The principal product to be shown will be the new recording equipment, which keeps constant tab on heat discharged up the chimney of a boiler-room, thus enabling operators to make adjustments to reduce this loss to a minimum. Other boiler-room instruments, including Uehling pyrometers and draft gauges, will also be displayed.

District Sales Manager.

C. L. Robison has been appointed district sales manager in the States of Texas and Louisiana for the Mount-Cooper Boiler & Iron Co. of Tulsa, Okla., his office being at 309 Wheat Bldg., Fort Worth, Tex. Telephone, Lamar 1772. Mr. Robison was for years sales manager for the Southwestern Mechanical Co., now dissolved.

Trucks, Tractors, Automobiles, Etc.

Southern Motors already is operating two permanent units on its permanent plant site and three temporary units in the City of Houston (Texas) proper. It is producing "Ranger" trucks, tractors, trailers, passenger cars and commercial bodies.

Trade Literature.

A Fine Catalogue.

"Thor" Catalogue No. 11, just issued by the Independent Pneumatic Tool Co. of Chicago, New York and London, is ready for distribution immediately. It presents full information concerning the pneumatic and electric tools made by this concern, including air and electric drills, building tools, chipping hammers, grinders, hoists, riveters, riveting hammers, etc. New additions to the line of products are motor-driven air hoists, pneumatic sand rammers, universal vises for pneumatic drills, hose coupling, power screw-drivers, hose clamps and hose menders. The book, which has 78 pages, has been prepared in a high-class manner, the illustrations, the data and the other material being clean-cut and distinct in every detail.

Hardware Jobbers' Directory.

The American Hardware Jobbers' Directory and Trade Name Index for 1920 has just been issued by Edwin G. Baltz, publisher, 107 6th St., Pittsburgh, Pa. Its 270 pages contain lists of hardware jobbers in the United States and Canada, lines of goods handled by them (70 classifications); names of buyers of the different houses, besides lists of jobbers of heavy hardware, automobile accessories, New York exporters han-

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

Enlarging Their Plant.

The Concrete & Steel Construction Co., Independent Bldg., Joplin, Mo., are increasing their capacity by the erection of a new fabricating plant at 15th and Illinois Sts. there. The new building will be 80 feet by 100 feet, and with its traveling crane, its punches and shears and other necessary machinery will enable the company to handle structural steel in greater quantities than heretofore. The company carries in stock structural and reinforcing steel for its trade in Missouri, Oklahoma, Kansas and Arkansas, and undertakes concrete and steel bridge construction within a radius of 250 miles from its plant.

Established New Offices.

New offices have been opened by the American Rolling Mill Co. of Middletown, O., in the Hibernia Bank Bldg., New Orleans, La., to cover the Southern States, including the State of Texas, excepting El Paso. The office will be in charge of C. C. Lynd, who has represented this company at Atlanta, Ga., for several years. Growing Southern business of the company, manufacturers of American ingot iron, has made it advisable to divide the territory.

Shale Oil Extracting Plant.

The Industrial Process Engineering Co., Suite 508-9, 320 N. Grand Ave., St. Louis, Mo., reports the completion of a full 30-hour continuous run of its shale oil extraction plant, and says that the operation could have been continued indefinitely, but the supply of pulverized shale became exhausted. This mode of extracting oil from shale is named the "Johns process," after its inventor, and the company further states that the plant comprises "features which are new and fundamental." Continuing the statement made by the company says, "The pulverization of the material before retorting is by far the most important phase of these inventions. Pulverization to the proper fineness allows almost immediate access of heat to the latent vapors within the material, allowing their expulsion to be almost immediate." The following claims are made for the plant: "It is self-contained. A little kindling is all that is necessary to start it. It requires no additional fuel aside from what it produces. The material is entirely exhausted of its fumes. One man can conduct a plant of reasonable size. The cost of original construction has been reduced largely on account of the use of standardized material, enabling the entire plant to be bought on the open market."

Important Auction Sales.

J. E. Conant & Co., auctioneers, Lowell, Mass., report that the plant of the Foundation Company—Port Huron Shipyard, Inc., at Port Huron, Mich., which was sold on July 29, was purchased by Hyman L. Goldman for \$216,000. Another sale of 876 machine

tools took place at West Springfield, Mass., August 4, and realized a total of more than \$80,000. There were bidders present from fifteen States.

Trees Planted at Birthday Celebrations.

The fiftieth birthday anniversary of Henry L. Doherty of New York, founder of the Cities Service Co., which operates public utilities in different parts of the country North, South, East and West, was celebrated May 15, 1920, by the Doherty Men's Fraternity, which, through its chapters in the various properties of the Doherty organization, planted trees as memorials of the occasion and as tributes to their leader. To preserve records of the day and its celebration a large book has been issued presenting illustrations of the tree plantings here and there, and brief reports of the speech-making and other features of the respective gatherings. The publication, which bears upon its first page a reproduction of a photograph of Mr. Doherty, is handsomely gotten up, the paper, the press work and the illustrations all being of a superior character. Upon its front cover page are the words: "Scrap Book Doherty Birthday Tree Planting, May 15, 1920."

Removal.

Rickard & Sloan, Inc., announce the removal of their advertising organization from the old location to 25 Spruce St., corner of William St., New York City. They were formerly in the Evening Post Bldg. Formal notice of the change is made in a booklet which they have named "Trekkling." It is appropriately illustrated, and contains also names of their clients and fine examples of their advertising skill.

Department Manager Appointed.

Exum M. Haas, railroad specialist, it is announced, has been appointed manager of the railroad department of the H. K. Ferguson Company, engineers and builders, Cleveland, Ohio. Mr. Haas is a graduate of Purdue University, Class of 1905. For eight years after completing his engineering course he was actively engaged in railroad maintenance and construction. Then for several years he was Western editor of the Electric Railway Journal, and from 1917 to 1920 sales engineer for the Austin Company. He is a member of the American Society of Civil Engineers, the American Railway Engineers' Association and the committee on shops and terminals.

Line of Products Enlarged.

James T. Lee was recently added to the sales engineering staff of the Southwark Foundry & Machine Co., Philadelphia, Pa. Mr. Lee, for several years, was vice-president in charge of sales of the Hanna Engineering Works, Chicago. It is the purpose of the Southwark Foundry & Machine Co. to greatly broaden its field of activity by adding to its

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

(Continued on Page 152)



"2 Hours Instead of 16"

"Originally it took sixteen hours to calculate the data on form 714 from form 1976 (pay-roll distribution forms). With the Monroe Calculating Machine it takes two hours."
Westinghouse Air Brake Co.

An Extra Set of Brains— An Extra Set of Eyes—

For Everyone in Your Office

An extra set of brains—when the Monroe multiplies, or divides, or subtracts, or adds—and every operation can be done with equal ease—the Monroe finds the result for you by the direct method from problem to answer.

You don't have to un-learn time-tested methods of figuring; you don't have to learn any new methods. You simply put your problem up to the Monroe by "writing" the problem on the machine; the Monroe assumes the rest of the burden for you—an extra set of brains thinks out the answer for you—with remarkable rapidity and with absolute accuracy.

And you're CERTAIN the answer is right!

An extra set of eyes keeps vigil over the work all the time guarding against the contingency of an operator's error. That is the visible check feature of the Monroe, which enables you to prove your work as you proceed, and insures you the correct answer at the end.

In every business, on all kinds of figure-work, let the Monroe do the brain-work of extending invoices, figuring payrolls, finding costs, footing ledgers, computing interest, proving freight bills and allowances, converting foreign currency, making estimates, solving engineering formulae. Let the Monroe show you how—isn't it worth a postage stamp to have a copy of "Book of Facts"? Simply send along the coupon.



MONROE

REG. U. S. PAT. OFF.

Calculating Machine

The "SHOW ME" Coupon—Mail it today
Monroe Calculating Machine Co., Westerbeth Building, New York
Without obligation (check items desired)
I send as a copy of "Book of Facts,"
our office.
Mr. Name.....
Address.....
M. R.
9-12-20

ding hardware, department stores handling hardware and house furnishing goods, and of hardware importers in South America. There is also a trade name index with the names of hardware articles alphabetically arranged.

Concrete for Various Uses.

The Portland Cement Association has published three valuable bulletins dealing with the following subjects: "Concrete Railway Track Support," this being a review of existing examples and of suggested designs for permanent supports of track; "Curing Concrete Pavements," which is a very useful description of how to make concrete pavements most durable; and "Concrete Highway Grade Crossings," which deals with the use of concrete instead of other paving material at railroad crossings. It is used in the form of concrete "planks," instead of wooden planks.

Oxweld Instruction Book.

The new "Eveready" instruction book, put out recently by the Oxweld Acetylene Co., 3640 Jasper Place, Chicago, Ill., is one of the best treatises on every-day oxy-acetylene welding and cutting. It is compact and handy (5 inches by 8 inches), containing 53 printed pages, inclusive of illustrations and drawings. It covers the field of everyday applications clearly and concisely and in language easy for the beginner to grasp, while it is also valuable to the experienced welder and cutter. This booklet is distributed free. The company is also distributing a new catalog, issued in sections, concerning the Eveready line (formerly Prest-O-Lite) welding and cutting blowpipes, etc.

Chain Blocks and Trolleys.

A machine shop issue of "Hoisting Hints," published by the Yale & Towne Manufacturing Co., Stamford, Conn., shows by many fine illustrations the different uses of chain blocks and trolleys, appropriate descriptions accompanying the pictures. The works at Stamford now employ more than 5800 persons. Everyone interested in the use of these devices will find this bulletin of value.

Pneumatic Rock Drill.

Bulletin 504, recently issued by the Chicago Pneumatic Tool Co., 6 E. 44th St., New York, describing their "Slogger" rock drill, is now available, upon request, from their New York office or branches.

Financial News

New Financial Corporations.

Ark., Hartford.—Farmers & Miners' Natl. Bank, capital stock \$50,000, is organized. I. H. Nakdimen, Prest.; P. P. Baker, V.-P.; David Moore, Cash.

Fla., Key West.—A bank with \$100,000 capital is being organized by J. R. Anthony of Jacksonville to be associated with the Bankers' Financing Co. of Jacksonville. Address W. H. Matthews, Secy. Key West Chamber of Commerce for information.

Ky., Manchester.—First State Bank, capital \$20,000, is inceptd. L. M. Hensley, T. H. Webb and Wood Hacker.

Okla., Laverne.—First National Bank, conversion of Laverne State Bank, capital \$25,000, has applied for charter. Roy Sappington and others.

Tex., Mont Belvieu.—Guaranty State Bank, capital stock \$20,000, is chartered. D. K.

Collier, Prest., and R. S. Gillespie, Cash.

Tex., Naples.—First State Bank has opened for business with Dr. G. B. Martin, Prest.; Dr. Wm Smith, V.-P., and Samuel Heath, Cashier.

Va., Woodstock.—National Bank, conversion of Valley Savings Bank, capital \$50,000, has applied for charter. N. H. Corman and others.

New Securities.

Ark., McCaskill—(School).—Bids received until Aug. 9 for \$25,000 of bonds of McCaskill Special School Dist., Hempstead County. Address C. T. Atkins, Prest. Board of Directors.

Fla., Bartow—(Road and Bridge).—The following 6 per cent Polk County bonds, offered on July 26, have been withdrawn from the market: \$60,000 Road and Bridge Dist. No. 6 and \$250,000 Road and Bridge Dist. No. 4. Address J. A. Johnson, Clerk Board County Commrs.

Fla., Bradentown—(Street, Bridge).—No bids were received for the \$31,500 of 6 per cent \$500 denomination 30-year bonds, dated Aug. 1, voted Mch. 30 and offered July 29. L. L. Hine is City Clk.

Fla., Clearwater—(Golf Links).—Sold to Bank of Clearwater at par \$30,000 of city bonds.

Fla., Crestview—(School).—Bids received until Aug. 20 for \$8000 of 6 per cent \$1000 denomination 30-year bonds of Special Tax School Dist. No. 9 voted July 17. Address W. C. Pryor.

Fla., Miami Beach—(Road).—\$172,000 of bonds have been authorized. Address The Mayor.

Fla., Ocala—(Street).—Bids will be received until 10 A. M. Sept. 8 for \$50,000 of 5 per cent \$1000 denomination bonds, dated Oct. 1, 1920. Address E. J. Crook, Secy. Sinking Fund Commission. For particulars see *Proposals Department*.

Ga., Metter—(School).—Voted July 31 \$40,000 of bonds. Address Board of Education.

Ga., Payne City—(Sewer, Water, Light).—Election Sept. 7 on the following 6 per cent bonds, dated Oct. 15, 1920: \$3000 sewer, \$3000 water and \$1500 light. Address L. W. Greene, Mayor.

Ga., Waycross—(Road).—\$700,000 of Ware County bonds have been sold. Address C. C. Thomas, Secy. County Bond Comsn.

La., Franklinton—(Water-works).—Voted Aug. 3 \$37,000 of bonds. Address The Mayor.

La., Oberlin—(Road).—The following 5 per cent \$1000 denomination Allen Parish bonds are being offered by Caldwell & Co. of Nashville: \$225,000 Road Dist. No. 1 and \$200,000 Road Dist. No. 2, all being dated Sept. 15, 1919.

Md., Easton—(Road, School).—Sold to Baker, Watts & Co., Townsend Scott & Sons and Nelson, Cook & Co. of Baltimore \$200,000 of 5½ per cent \$500 denomination Talbot County road bonds offered Aug. 3. The \$40,000 of 5 per cent \$500 denomination Trappe School Dist., Talbot County, school bonds offered the same day were not sold, as bids were rejected. Henry P. Turner is County Clerk.

Miss., Clarksdale—(Road).—The \$500,000 of Coahoma County bonds voted Aug. 3 were sold to Planters' Bank of Clarksdale at par, plus accrued interest.

Miss., Corinth—(School).—Sold to Corinth Bank & Trust Co. and First National Bank at par \$15,000 of 6 per cent serial bonds, dated June 1 and offered August 2.

Miss., Ellisville—(Municipal).—Bids will be received until Aug. 23 for \$10,000 of 6 per cent bonds. Address H. P. Gough, Clk. For particulars see *Proposals Department*.

Miss., Hazlehurst—(School).—Election Aug. 14 on \$8000 of Copiah County bonds. Address County Commrs.

Miss., Jackson—(Improvement).—Bids received until Aug. 11 for \$250,000 of State bonds. Address Frank Roberson, Attorney-General.

Miss., Jackson—(Refunding).—\$50,000 of 6 per cent Hinds County bonds have been authorized by the Board of Supervisors. Address Lamar Puryear, Prest. Board Supvrs.

Miss., Laurel—(Water, Street).—\$50,000 of 6 per cent \$1000 denomination serial bonds voted June 11 have been approved by the Mayor and Board of Commissioners. Address F. A. Smallwood, City Clk.

Miss., Louisville—(School).—Contemplated to issue \$6000 of Winston County, Ellison Ridge Consolidated School Dist. bonds. Address B. M. McCully, Clk. Board of Supvrs.

Miss., Meridian—(Auditorium).—An election will be held on \$100,000 of bonds. Address W. H. White, City Clk.

Miss., Moss Point—(Paving).—Contemplated to issue \$10,000 of bonds. Address The Mayor.

Miss., Picaune—(Water-works).—Election Aug. 31 on \$60,000 of 6 per cent bonds. Address The Mayor.

Miss., Tunica—(Courthouse).—Sold to I. B. Tigrett & Co. of Jackson, Tenn., at par and accrued interest \$200,000 of Tunica County bonds.

Mo., Kansas City—(Courthouse).—Contemplated to issue \$5,000,000 of Jackson County bonds. Address County Commrs., Independence, Mo.

Mo., Moberly—(Water).—An election will be held soon on \$175,000 of bonds. Address The Mayor.

Mo., St. Joseph—(Road).—\$200,000 of 5 per cent \$1000 denomination Buchanan County bonds, dated June 1, 1920, are being offered by Stern Bros. of Kansas City.

N. C., Ayden—(Water, Light).—Bids received, it is reported, until 8 P. M. Aug. 7 for \$22,000 of 6 per cent \$1000 denomination 1923-1944 bonds, dated July 1, 1920. Address J. K. Quinherly, Town Clk.

N. C., Columbia—(Road and Bridge).—The \$100,000 of 6 per cent Tyrrell County bonds offered Aug. 2 were not sold, and they will probably be taken off the market. Address A. Melson, Register of Deeds.

N. C., Lexington—(Street, School).—\$335,000 of 6 per cent serial bonds have been sold at par to the following concerns: \$100,000 Dacotah Cotton Mill; \$96,000 Bank of Lexington; \$75,000 Commercial and Savings Bank; \$54,000 Wenonah Cotton Mill.

N. C., Smithfield—(Road).—Bids will be received until noon Sept. 6 for \$50,000 of 6 per cent 39½-year Johnston County bonds. Address Sam T. Honeycutt, Clerk Board Commissioners.

N. C., Wilmington—(School).—Contemplated to issue \$1,250,000 of bonds for negro schools. Address Board of Education.

N. C., Wilson—(Water, Sewer).—\$32,500 water and \$32,500 sewer 40-year bonds have been authorized. Address Theo. A. Hinnant, Clerk.

N. C., Winston-Salem—(Street).—Bids will be received until noon Aug. 18 for \$301,000 of 6 per cent \$1000 denomination serial bonds. Address W. H. Holcomb, City Secy.

Okla., Holdenville—(Courthouse, School, Bridge).—\$600,000 of bonds have been voted. Address The Mayor.

S. C., Anderson—(Road).—Sold to the Security Trust Co. of Spartanburg, at slightly

(Continued on Page 154)



TURN YOUR SCRAP
PILE INTO DIVIDENDS

6th National Exposition

CHEMICAL INDUSTRIES

Grand Central Palace, New York City

WEEK OF SEPTEMBER 20th 1920

This Exposition
has done this for
thousands. It
can do the same
for you.

America's leading
manufacturers
of machinery,
equipment
and materials
who have solved
many of the
world's industrial
problems
will be here to
show you how
you can make
use of every bit
of material which
now goes into
your waste pile.

Manufacturers in
every industry
can secure many
valuable ideas at
this Exposition.

below par, \$580,000 of 5 per cent serial 1922-1951 bonds of Anderson County, dated July 1, 1919, and offered Aug. 2.

S. C., Batesburg—(Street, Sewer, Water).—No sale was made. It is reported, of the \$130,000 of 6 per cent serial bonds offered June 15. Address J. T. Taylor, Town Clk.

S. C., Florence—(Road).—Election probably on Aug. 31 for \$450,000 of Florence County bonds. Address County Commrs.

S. C., McCormick—(Courthouse, Jail).—Bids will be received until 12.30 P. M. Aug. 31 for \$30,000 of 6 per cent \$500 denomination McCormick County bonds, dated Sept. 1 1920. Address T. L. Edmunds, Secy. Town Council. For particulars see *Proposals Department*.

S. C., Rock Hill—(Water, Sewer, Street).—Sold to J. H. Hillsman & Co. of Atlanta, Ga., \$150,000 water and sewer and \$100,000 street bonds, voted last fall.

S. C., Woodruff—(Street).—Bids will be received until 3 P. M. Aug. 26 for \$47,500 of 5½ per cent 20-40-year bonds, dated July 1, 1920. Address W. H. Shanklin, Town Clk.

Tenn., Gleason—(Water-works).—Bids will be received until 1 P. M. Sept. 15 for \$20,000 of 6 per cent 20-year bonds, dated Oct. 1. Address J. P. M. Deck, Mayor. For particulars see *Proposals Department*.

Tenn., Humboldt—(Sewer).—Sold to Speed & Kearney at par and interest \$70,000 of 5½ per cent 20-year serial bonds, offered July 22.

Tenn., Knoxville — (Funding, Viaduct, School).—Contemplated to hold an election on \$2,000,000 of city bonds. Address Mayor E. W. Neal.

Tenn., Savannah—(School).—Bids will be received until Sept. 8 for \$25,000 of 6 per cent 20-year bonds. Address L. K. Freeman, Mayor. For particulars see *Proposals Department*.

Tex., Baird—(Street, Bridge, Water).—\$14,000 street and bridge, and \$8000 water bonds have been voted. Address The Mayor.

Tex., Clarksville—(Levee).—\$100,000 of Levee Dist. No. 1, Red River County, bonds have been voted. Address County Commrs.

Tex., Denison — (Street, School, Light).—Bids will be received until 3 P. M. Aug. 5 for the following 5 per cent serial bonds: \$200,000 street, \$22,000 school and \$22,000 light. Address Robert Gerlach, City Secy.

Tex., Eastland—(Sewer, Water).—\$400,000 of 6 per cent 20-40-year optional bonds have been approved by the Atty.-Gen. as follows: \$150,000 water and \$250,000 sewer. Address The Mayor.

Tex., El Paso—(Road).—\$800,000 of 5 per cent serial El Paso County bonds have been approved by the Atty.-Gen. Address County Commrs.

Tex., Goodnight—(School).—\$25,000 of 5 per cent \$1000 denomination 40-year serial bonds, dated Mar. 11, 1920, and voted Sept. 9, 1919, have been registered. Address J. M. Crain.

Tex., Hebronville—(Road).—\$25,000 of 5 per cent serial Jim Hogg County bonds have been approved by the Attorney-General. Address County Commrs.

Tex., New Boston—(School).—Voted July 27 \$4000 of bonds. Address School Board.

Va., Christiansburg — (Road).—No bids were received for the \$15,000 of 4½ per cent 20-30-year optional Montgomery County bonds, offered July 26. Address Archer P. Johnson, Clerk Board Supvrs.

Va., Richmond — (Road, Street).—Sold to Eldredge & Co., and Eastman, Dillon & Co. of New York at \$91.29, \$500,000 of 4½ per cent \$1000 denomination 10-year city bonds, dated July 1, 1920, and offered Aug. 3.

Va., Wise—(School).—An election has been

authorized for \$75,000 of Richmond School Dist., Wise County, bonds as follows: \$50,000 Appalachia, \$17,500 East Stone Gap and \$7500 Buffalo. Address H. A. W. Skeen, County Judge.

Financial Notes.

La Rue National Bank of Hodgenville, Ky., has increased capital from \$40,000 to \$50,000.

National Bank of Alamance, Graham, N. C., has increased capital from \$50,000 to \$125,000.

First National Bank of De Ridder, La., has increased capital from \$25,000 to \$100,000.

Camden National Bank of Camden, Ark., has increased capital from \$50,000 to \$100,000.

National Bank of Suffolk, Va., has increased capital from \$140,000 to \$500,000.

People's Savings Bank of Little Rock, Ark., has increased capital from \$100,000 to \$200,000.

Cabarrus Savings Bank, Concord, N. C., has increased capital from \$100,000 to \$400,000.

People's Bank & Trust Co., Tupelo, Miss., has increased capital stock from \$125,000 to \$200,000.

Farmers and Merchants' National Bank of Henderson, Tex., has increased capital from \$25,000 to \$50,000.

Lynchburg National Bank, Lynchburg, Va., has increased capital from \$500,000 to \$1,000,000.

Citizens' National Bank of Covington, Va., has increased capital from \$60,000 to \$100,000.

Citizens' Savings Bank of West Point, Ga., will increase capital stock from \$50,000 to \$100,000.

Headquarters for the American Bankers' Association Convention, to be held in Washington during the week of October 18, have been opened in the Willard Hotel there with Thomas Grant in charge.

The Fourth Southern Textile Exposition will be held in Textile Hall, Greenville, South Carolina, October 18 to 23 inclusive.

All interested in textile industries are cordially invited to attend.

**Southern Textile Exposition, Inc.
Greenville, South Carolina**

We Finance

Electric Power and Light Enterprises with Records of Established Earnings

We Offer

**Bankers and Investment Dealers
Proven Power and Light Securities**

Correspondence Solicited

ELECTRIC BOND & SHARE CO.

(Paid-up Capital and Surplus, \$24,000,000)

71 Broadway

New York

Chesapeake Brand Carbon Papers and Typewriter Ribbons have been used in the South for the past ten years. Let us solve your typewriter supply troubles. Send for samples.

Graham, Tinley and Co., Inc.

17 W. Lexington St. - BALTIMORE, MD.

If you wish to keep posted on the progress of the South, read the

Manufacturers Record
Exponent of America

Price, \$6.50 a year

Six months for \$3.50



Capital and Surplus
\$4,000,000

Total Resources
\$38,000,000

Large enough to handle your biggest problems, but not too large to be interested in your smaller ones.

**MERCHANTS-MECHANICS
FIRST NATIONAL BANK
OF BALTIMORE**

**LOANS MADE TO
STATES, CITIES, COUNTIES, ETC.**

Also Entire Issues of Bonds of
Successful Industrials Purchased

Largest Capital and Surplus of Any Financial
Institution in Maryland or any Southern State

Established 1884

Resources \$21,000,000

**Mercantile Trust and Deposit Co.
OF BALTIMORE**

A. H. S. POST, President. F. G. BOYCE, JR., Vice-President.

**MARYLAND TRUST COMPANY
BALTIMORE**

Transacts a General Trust and Banking Business

Correspondence and Interviews Invited

CAPITAL. \$1,000,000

**The National Exchange Bank
OF BALTIMORE, MD.**

Capital, \$1,500,000 Surplus, \$1,000,000

W. L. SLAYTON & CO.

—Dealers in—

City
County
Township

BONDS

Road
School
Drainage

TOLEDO, O.

We buy Municipal Securities from Contractors subject to their being awarded contract involving the issue. Write our nearest office before bidding for Municipal work.

Buying Offices at Birmingham, Ala., New Orleans, La., Dallas, Tex., Tampa, Fla.

**DELAWARE CORPORATIONS
DIGEST OF LAW**

(7th ED.) FREE ON REQUEST

STOCK WITHOUT PAR VALUE, if desired.

The most modern and scientific method of corporate organization

CORPORATIONS ORGANIZED AND REPRESENTED.

22 Years' Experience

Corporation Company of Delaware
Equitable Building, Wilmington, Del.

FOR INFORMATION ABOUT

BIRMINGHAM REAL ESTATE

and INVESTMENT OPENINGS, write

JEMISON

REAL ESTATE & INSURANCE COMPANY
BIRMINGHAM, ALA.

We Finance

**MUNICIPALITIES AND HIGH GRADE
INDUSTRIAL COMPANIES**

Correspondence Invited

Lawrence Chamberlain & Company

115 Broadway (Incorporated) New York

**BONDS PURCHASED
MUNICIPAL AND CORPORATION**

Correspondence invited from officers of
Municipalities and from well-established
industrial corporations contemplating
new financing.

HORNBLOWER & WEEKS

Established 1888

INVESTMENT SECURITIES

42 BROADWAY NEW YORK

BOSTON CHICAGO DETROIT
PROVIDENCE PORTLAND, ME.

YOUNG & SELDEN COMPANY

MANUFACTURING

Bank and Commercial Stationers

BALTIMORE, MD.

ELSTON & COMPANY

71 W. Monroe St. CHICAGO

COUNTY, CITY, SCHOOL, ROAD
BONDS—WANTED

APPRAISALS

Lumber and Woodworking Plants
Industrial Buildings and Residences

JAMES McANDREW

P. O. Box 1402 - Savannah, Ga.

BOOST PRODUCTION

Add 20 per cent. to speed by equipping your stenographic
department with


REID COPYHOLDERS

A. B. REID & COMPANY

223 Grand Ave., W. Detroit, Mich.

DENVER ALFALFA MILLING & PRODUCTS COMPANY
MC CLAVE, COLORADO

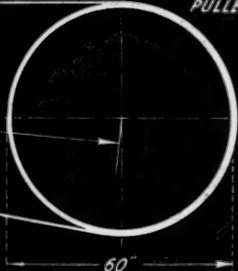
DRIVEN
PULLEY



16"

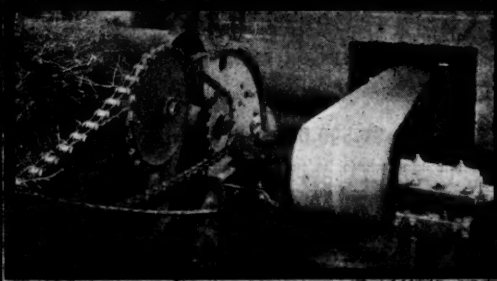
33'-7"

DRIVE
PULLEY



60"

OUTLINE GRINDER DRIVE
 Maximum H.P. Required — 250
 R.P.M. Drive Pulley — 480
 Belt Speed — 7539 F.P.M.



Specified: **GOODYEAR BELT**
 18" 5 Ply **BLUE STREAK**

Copyright 1920, by The Goodyear Tire & Rubber Co.

A Mile and a Half a Minute — and the G. T. M.

High speed, normally 7,539 feet per minute, often rising to 9,000 F. P. M., and continuously severe duty in the delivery of from 150 to 250 horsepower, characterize the service conditions on the grinder drive. Every now and then, with a suddenness that imposes a terrific strain on the belting, wet alfalfa packs in the grinder and throws an enormous overload on both belt and engine.

Every grinder drive in the eleven mills of the Denver Alfalfa Milling & Products Co. is equipped today with an 18-inch, 5-ply Goodyear Blue Streak Belt. Each of these powerful, long-lived belts has long since demonstrated by trouble-free, economical service its right to the job, but all of them won this service opportunity on the showing made by a smaller Goodyear Blue Streak and a series of drive analyses by a G. T. M.—Goodyear Technical Man.

It's nearly five years now since a G. T. M. studied the blower drive in one of the Denver Company's plants, and recommended an 18-inch, 5-ply Goodyear Blue Streak Belt for that work. The performance it gave suggested to Floyd Wilson, the Vice-President and General Manager, that a G. T. M. could study with profit to the Company those exacting grinder drives on which new belts were used up every six months.

They went at it scientifically, following the Goodyear Analysis Plan to fit the belt to the duty required. Mr. Wilson furnished the analyst with all the factors of operating conditions that would fill out an expert study of pulley

dimensions, horsepower developed, speed, load and overload sustained.

The 18-inch, 5-ply Goodyear Blue Streak Belt which is standard equipment on all the Denver Company's grinder drives today may be studied in its typical operating condition at the McClave plant. It has been transmitting power unfailingly there for two years now—where other belts had averaged six months. It has worked sliplessly—which means, in any transmission, full power delivered—and smoothly, which means, in alfalfa milling, meal uniformly ground.

It has proved its economy in every phase from first cost to this day's grist. Usually, Goodyear Blue Streak Belts involve a slightly higher initial outlay, in favor of lowest ultimate cost. This one, however, cost \$103.74 less than its short-lived predecessor. Multiply this by eleven, and add the economies achieved by the trouble-free operation and four times longer life, and the result is the Company's belting profit on Goodyear Blue Streak Belts.

This is the value of meeting a drive condition with a better belt, scientifically specified to the duty required of it. If you have a belting problem, involving either a single drive or an entire plant, the G. T. M. and the Goodyear Analysis Plan are at your command for the utmost in value that we build into these belts that protect our good name. Write to The Goodyear Tire & Rubber Company at Akron, Ohio, or Los Angeles, California.

GOODYEAR



PROPOSALS

BOND ISSUES BUILDINGS PAVING GOOD ROADS

Bids close August 31, 1920.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., August 31, 1920. Sealed proposals will be opened in this office at 3 P. M. August 31, 1920, for Toilet-rooms in the United States Marine Hospital at St. Louis, Mo., in accordance with specification and drawing, copies of which may be had at this office or at the office of the Custodian, St. Louis, Mo., in the discretion of the Supervising Architect. JAS. A. WETMORE, Acting Supervising Architect.

Bids close August 27, 1920.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., July 30, 1920. Sealed proposals will be opened in this office at 3 P. M. August 27, 1920, for the installation of a Sewage Ejector, etc., at the United States Postoffice and Courthouse, Del Rio, Tex., in accordance with the drawing and specification, copies of which may be had at this office or at the office of the custodian at Del Rio, Tex., in the discretion of the Supervising Architect. JAS. A. WETMORE, Acting Supervising Architect.

Bids close August 24, 1920.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C. July 27, 1920. Sealed proposals will be opened in this office at 3 P. M. August 24, 1920, for toilet-room for women in the United States Courthouse and Postoffice, Columbia, S. C., in accordance with specification and drawing, copies of which may be had at this office or at the office of the custodian, Columbia, S. C., in the discretion of the Supervising Architect. JAS. A. WETMORE, Acting Supervising Architect.

Bids close September 3, 1920.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., July 30, 1920. Sealed proposals will be opened in this office at 3 P. M. September 3, 1920, for the completion of the United States Postoffice at Columbia, S. C. Drawings and specifications may be obtained from the superintendent of construction at Columbia, S. C., or at this office, in the discretion of the Supervising Architect. JAS. A. WETMORE, Acting Supervising Architect.

Bids close August 26, 1920.

PROPOSALS FOR STEEL, IRON, MANGANESE Castings, Pig-iron, Cast-iron Pipe, Steel Rope, Bronze Rope, Steel Wire, Pipe Tees, Bolts, Nuts, Rivets, Lead Washers, Brass, Bronze, Copper, Brass Tubing, Cuspidors, Grommets, Latches, Locks, Steel Tapes, Vises, Wrenches, Electric Switches, Anchors, Binnacles, Tarred Felt, Life Preservers, Oars, Chalk Line, Manila Rope, Twine, File Handles, Fire Brick, Antimony, Ferrotitanium, Lime, Pitch, Varnish, Tag Board, Lumber and Millwork. Sealed proposals will be received at the office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10.30 o'clock A. M. August 26, 1920, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and information relating to this Circular (1396) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City; 606 Common Street, New Orleans, La., and Fort Mason, San Francisco, Cal.; also from the United States Engineer Offices in the principal cities throughout the United States. A. L. FLINT, General Purchasing Officer.

Bids close August 30, 1920.

PROPOSALS FOR STEEL, MANGANESE Steel Gears, Steel Boiler Tubes, Iron or Steel Chain, Duplex Pumps, Iron Rope, Water Buckets, Iron or Steel Pipe, Pipe Fittings, Babbitt, Brass, Copper, Bearing Metal, Yellow Metal, Solder, Nails, Staples, Nuts, Screws, Tacks, Ball Bearings, Chisels, Milling Cutters, Dies or Chasers, End Mills, Saws, Wrenches, Handles, Lamps, Lanterns, Oilers and Price Card Stands. Sealed proposals will be received at the Office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10.30 A. M. August 30, 1920, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and information relating to this Circular (1398) may be obtained from this office or the offices of the

Assistant Purchasing Agent, 24 State Street, New York City; 606 Common Street, New Orleans, La., and Fort Mason, San Francisco, Cal.; also from the United States Engineer Offices in the principal cities throughout the United States. A. L. FLINT, General Purchasing Officer.

Bids close August 17, 1920.

PROPOSALS FOR GASOLINE. Sealed proposals will be received at the office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10.30 o'clock A. M. August 17, 1920, at which time they will be opened in public, for furnishing the above-mentioned article. Blanks and information relating to this Circular (1397) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City; 606 Common Street, New Orleans, La., and Fort Mason, San Francisco, Cal.; also from the United States Engineer Offices in the principal cities throughout the United States. A. L. FLINT, General Purchasing Officer.

Bids close August 26, 1920.

PROPOSALS FOR FIVE RETURN-FLUE BOILERS FOR U. S. S. CHISCA. Office Mississippi River Commission, 1st and 2d Districts, Custom-house, Memphis, Tenn. Sealed proposals will be received here until 11 A. M. August 26, 1920, and then opened, for furnishing and delivering five return-flue boilers for U. S. S. Chisca. Further information on application.

Bids close August 26, 1920.

PROPOSALS FOR STEEL HULL FOR U. S. S. CHISCA. Office Mississippi River Commission, 1st and 2d Districts, Custom-house, Memphis, Tenn. Sealed proposals will be received here until 11 A. M. August 26, 1920, and then opened, for furnishing one steel hull for U. S. S. Chisca. Further information on application.

Bids close August 21, 1920.

OFFICE OF THE CONSTRUCTING QUARTERMASTER, Savanna Proving Ground, Savanna, Illinois. Sealed proposals will be opened at this office on August 21, 1920, 11 A. M., for construction of approximately 17 miles of standard-gauge railroad; also the building of a nitrate storage plant. Plans and specifications may be had upon application to this office or the Office First District, Construction Service, War Trades Building, Washington, D. C. Contractors submitting proposals should visit the site.

Bids close August 17, 1920.

Notice to Contractors

Sealed proposals for constructing or improving the Three States National Forest Road project, located within or partly within the Nantahala National Forest, States of Georgia, North Carolina and South Carolina, Counties of Rabun (Ga.), Macon (N. C.) and Oconee (S. C.), will be received by the District Engineer, Bureau of Public Roads, U. S. Department of Agriculture, at Washington, D. C., until eleven o'clock A. M. on the seventeenth day of August, 1920, at which time and place they will be publicly opened and read. The right is reserved to reject any and all bids, and none will be considered except those from contractors ascertained to be experienced and responsible.

The length of project to be constructed or improved is approximately 20.9 miles, and the principal items of work are approximately as follows: 34 acres clearing, 34 acres grubbing, 23,000 cu. yds. rock excavation, 87,500 cu. yds. common excavation, 20.9 miles finishing earth road, 37 cu. yds. Class A concrete, 1770 lbs. reinforcing steel, 480 cu. yds. cement rubble masonry, 411 cu. yds. dry rubble masonry, 2756 lin. ft. 18-inch corrugated metal pipe, 982 lin. ft. 24-inch corrugated metal pipe, 206 lin. ft. 30-inch corrugated metal pipe, 12.8 M. ft. B. M. truss bridge material, 2500 lbs. bridge iron, 2.04 M. ft. B. M. bridge flooring, 1100 cu. yds. hand-placed rock fill, 288 lin. ft. log stringers.

The work embraced in this contract shall be completed within two hundred weather-working days (page 6) following the execution of the contract by the Secretary of Agriculture.

The contract form and the maps, plans, specifications and estimates of quantities

may be examined by responsible contractors at the following addresses: Office of Vernon M. Peirce, District Engineer, Room 506 Willard Building, Washington, D. C.; G. T. Macnab, Sr., Highway Engineer, Commercial National Bank Building, Raleigh, N. C.; H. W. Shields, Forest Supervisor, Franklin, N. C.; and Verne Rhoades, Forest Supervisor, Oates Building, Asheville, N. C.

All proposals must be made on forms and in accordance with instructions, forming a part of the specifications above referred to, and must be accompanied by a proposal guarantee in an amount at least equal to five (5) per cent. of the total amount of the proposal.

VERNON M. PEIRCE,
District Engineer.

Bids close August 16, 1920.

\$25,000 6% Street Bonds

Aurora, Beaufort Co., N. C. Sealed bids will be received by the Town Commissioners of Aurora at the City Hall in Aurora, North Carolina, until Monday, the 16th day of August, 1920, at 12 o'clock noon, when they will be publicly opened for the purchase of \$25,000 of bonds of the Town of Aurora; to be dated the 1st day of July, 1920; to mature in twenty annual installments, beginning July 1, 1921, and ending July 1, 1940, and to bear interest at the rate of 6 per cent. per annum, payable semi-annually. Principal and interest will be payable in New York City.

The proceeds of these bonds are to be used to build hard-surfaced streets in the Town of Aurora, North Carolina, and the bonds are issued under and pursuant to the Municipal Finance Act of North Carolina.

Bids may be addressed to the undersigned and must be accompanied by a certified check, payable to the order of the Treasurer of the Town of Aurora for 2 per centum of the face amount of bonds bid for as evidence of good faith. Right is reserved to reject any or all bids.

This 14th day of July, 1920.

THE BOARD OF COMMISSIONERS.

By L. D. MIDGETTE.

Mayor of the Town of Aurora.

Aurora, North Carolina.

WILEY C. RODMAN,

Attorney,

Washington, N. C.

Bids close August 22, 1920.

\$23,000 6% Street Bonds

Vanceboro, N. C. Bids will be opened August 22 for \$23,000 of 6 per cent. town bonds, 20-year maximum, \$1000 denomination maximum.

Address

H. E. BARROW,
Town Treasurer.

Bids close August 13, 1920.

\$300,000 Road Bonds

Laurel, Miss. Jones County, Mississippi, will sell \$300,000 Road Bonds.

The Board of Supervisors of Jones County, Mississippi, invites sealed bids to be filed with the Clerk of said Board on or before 12 M. on the 13th of August, 1920, for sale of \$300,000 of Good-Roads Bonds of Jones County. Serial, Non-Optional Bonds, bearing interest not to exceed 6 per cent., payable semi-annually, bonds due 1/50 first five years, 1/25 of total due next 15 years, and balance due in the next 10 years. Right to reject any and all bids reserved.

Certified check in the sum of \$10,000 must accompany bid.

U. S. COLLINS,
Clerk of Board of Supervisors.

Bids close August 16, 1920.

\$200,000 5 1/2% School Bonds

Matoaka, W. Va. The Board of Education, Rock District, Mercer County, West Virginia, will sell to the highest bidder on August 16, 1920, Two Hundred Thousand Dollars (\$200,000) of School-building bonds, five to fifteen years, interest 5 1/2 per cent. The bonds are in denominations of \$500 each. Submit bids to J. C. Burton, President, or M. R. Dodd, Secretary, Board of Education, Matoaka, West Virginia.

Bids close August 23, 1920.

\$60,000 5% Municipal Bonds

Albany, Ga.
Bids are solicited and will be received by the Mayor and Council of the City of Albany, Georgia, up to noon of the 23d day of August, 1920, for the purchase of the entire issue of the City's bonds now authorized and ready for issue as of August 1, 1920, amounting to the principal sum of \$60,000.

Of said bonds there will be issued and dated as of August 1, 1920, 60 bonds, numbered consecutively from 1 to 60 (both numbers inclusive), in denominations of \$1,000, each to bear interest at the rate of 5 per cent. per annum from date, payable semi-annually on the 1st day of February and August of each year, and evidenced by interest coupons attached to said bonds.

All of said bonds will become due and payable 29 years and 6 months from date, to wit, on February 1, 1950. Both principal and the interest of said bonds will be payable in gold coin of the United States of the present standard of weight and fineness at the office of Metals and Mechanics National Bank in the City of New York, State of New York.

Said bonds were duly validated by judgment of the Superior Court of Dougherty County on the 24th day of July, 1920, and are for the following purposes:

Bonds numbers 1 to 28, inclusive, for street paving, \$28,000.

Bonds numbers 29 to 40, inclusive, for sewer construction and extension, \$12,000.

Bonds numbers 41 to 50, inclusive, for extension of water mains, \$10,000.

Bonds numbers 51 to 60, inclusive, for erection and equipment of schoolhouse, \$10,000.

The record, properly certified, of all the proceedings had and taken relative to the issue and validation of said bonds will be furnished the successful bidder without expense. The expense of printing or lithographing said bonds will be borne by the purchaser.

All bids must be sealed, directed to the Clerk of Council, Albany, Georgia, labeled "Bond Bid," and must be accompanied by the certified check of the bidder for \$1,000. No bid will be accepted for less than par, and the Mayor and Council reserve the right to reject any and all bids.

This the 30th day of July, 1920.
H. A. PEACOCK, Mayor.
J. R. DE GRAFFENRIED, Clerk of Council.

FINANCIAL STATEMENT.

| | |
|---|----------------|
| Official assessed value of taxable property, 1919..... | \$7,886,454.76 |
| Estimated assessed value of taxable property, 1920..... | 8,500,000.00 |
| Total bonded debt of the City, including above issue of bonds | 537,000.00 |
| Amount in sinking fund to retire bonded debt..... | 62,228.82 |
| Fixed assets as per statement of certified accountants as of March 1, 1920..... | 1,017,792.41 |
| Total net fixed and current assets (over and above all liabilities, including bonded debt), as reported by certified accountants as of March 1, 1920..... | 692,102.95 |

Tax rate per \$1000, 1919, \$17.50.
Population United States Census, 1920, 11,555.

Population United States Census, 1910, 8140.
Correct: August 4, 1920.

WM. M. WILDER,
Treasurer and Collector,
City of Albany, Georgia.

Bids close August 23, 1920.

\$10,000 6% Municipal Bonds

Ellisville, Miss.
Notice is hereby given that the City of Ellisville, Mississippi, has issued \$10,000 negotiable municipal bonds, bearing 6 per cent. interest, and solicitation is hereby made for the purchase of said bonds, the board reserving the right to reject any and all bids. All bids must be accompanied with a certified check in the amount of \$100, and all of said bids must be filed with the City Clerk by August 23, 1920.

H. P. GOUGH,
Clerk.

Bids close September 8, 1920.

\$25,000 6% School-Improvement Bonds

Savannah, Tenn.
On Wednesday, September 8, 1920, at office of Mayor, the Town of Savannah, Tennessee, will sell \$25,000 School-Improvement Bonds, Series No. 1, to mature \$1250 annually for a period of twenty years; interest 6 per cent.,

payable annually. To sell for not less than par. Deposit 10 per cent. of bid required, to be returned to unsuccessful bidder. Sealed bids. Address

L. K. FREEMAN, Mayor,
Savannah, Tennessee.

Bids close September 8, 1920.

\$50,000 5% Street-Improvement Bonds

The Sinking Fund Commission of the City of Ocala, Fla., will, on Wednesday, September 8, 1920, at 10 A. M., receive and open up bids for Fifty Thousand Dollars City of Ocala Street-Improvement Bonds of the denomination of One Thousand Dollars each. Said bonds to be dated October 1, 1920, bearing interest at 5 per cent. per annum, payable semi-annually. Bonds payable in ten and twenty years. Interest, coupons and bonds, all payable at the office of the Secretary-Treasurer of the Sinking Fund Commission in the City of Ocala, Fla. All bids must be accompanied by a certified check for 5 per cent. of bid. Above-mentioned bonds have been duly validated according to the laws of the State of Florida. Address all communications relative to above to Mr. D. W. Davis, Chairman, or E. J. Crook, Secretary-Treasurer of the Sinking Fund Commission of the City of Ocala.

Ocala, Fla., August 5, 1920.

Bids close August 31, 1920.

\$30,000 6% Courthouse and Jail Bonds

McCormick, S. C.
Sealed bids will be received by the Town Council of the Town of McCormick, South Carolina, until 1230 o'clock P. M. August 31, 1920, on Thirty Thousand Dollars Six Per Cent. Courthouse and Jail Buildings Bonds for McCormick County, at which time said bids will be opened. The bonds to be dated September 1, 1920; to be in denomination of Five Hundred Dollars, and to be due and payable in accordance with following schedule:

| | |
|-----------------------|------------|
| November 1, 1921..... | \$1,000.00 |
| November 1, 1922..... | 1,000.00 |
| November 1, 1923..... | 1,000.00 |
| November 1, 1924..... | 1,000.00 |
| November 1, 1925..... | 1,000.00 |
| November 1, 1926..... | 1,000.00 |
| November 1, 1927..... | 1,500.00 |
| November 1, 1928..... | 1,500.00 |
| November 1, 1929..... | 1,500.00 |
| November 1, 1930..... | 1,500.00 |
| November 1, 1931..... | 1,500.00 |
| November 1, 1932..... | 1,500.00 |
| November 1, 1933..... | 1,500.00 |
| November 1, 1934..... | 2,000.00 |
| November 1, 1935..... | 2,000.00 |
| November 1, 1936..... | 2,000.00 |
| November 1, 1937..... | 2,000.00 |
| November 1, 1938..... | 2,000.00 |
| November 1, 1939..... | 2,000.00 |
| November 1, 1940..... | 2,000.00 |

\$30,000.00
Interest at 6 per cent. per annum on said bonds to be due and payable semi-annually on the first days of May and November of each year.

A certified check of \$500, payable to T. L. Edmunds, Secretary and Treasurer of Town Council, Town of McCormick, is required deposited with sealed bid.

For further information in regard to these bonds address all communications, as well as bids, to T. L. Edmunds, Secretary and Treasurer of Town Council of Town of McCormick.

T. L. EDMUNDS,
Secy. and Treas. Town Council,
Town of McCormick,
South Carolina.

August 4, 1920.

Bids close September 15, 1920.

\$20,000 Water-Works Bonds

Gleason, Tenn.
On the 15th day of September, 1920, beginning at 1 o'clock P. M., the Mayor and Aldermen of Gleason, Weakley County, Tennessee, will, at the Bank of Gleason, in said municipality, receive sealed bids for the sale of Twenty Thousand Dollars (\$20,000) of Municipal Water-works, Coupon, Interest-bearing Bonds, issued by the municipality of Gleason of date of October 1, 1920, payable in 20 years from said date, said bonds bearing 6 per cent. interest from date, payable semi-annually. A deposit of 10 per cent. of the price bid for said bonds must accompany each bid in the form of a certified check on a Tennessee bank cash deposit as a guarantee of the good faith of the bidder. Said municipality reserves the right to reject any or all bids. This the 9th day of August, 1920.

J. P. M. DECK, Mayor.
M. E. FANNING, Recorder.

Bids close August 26, 1920.

\$47,500 Street and Sidewalk Bonds

Sealed bids will be received on the 26th day of August, 1920, at 3 o'clock P. M., in Council Chambers at Woodruff, S. C., for \$47,500 of street and sidewalk improvement bonds of said town, bearing interest at the rate of 5 1/2 per cent. per annum, payable semi-annually, due forty (40) years after date, with the privilege of retiring same after twenty (20) years, and bearing date July 1, 1920. The Town Council reserves the right to reject any and all bids made. All bids should be filed with the undersigned on or before the date above mentioned.

W. H. SHANKLIN,
Clerk and Treasurer,
Woodruff, S. C.

Bids close August 24, 1920.

Street Paving

Columbia, S. C.
Sealed proposals will be received by the City Council at the Council Chamber until 10 A. M. August 24, 1920, for paving North Main Street from Scott Street to the northern city limits, involving the following approximate quantities:

19,000 square yards Roadway Paving.
6,100 square yards Sidewalk Paving.
3,000 cubic yards Excavation.

Proposals will be received on any one or all of the following types of paving: Brick, Bitulithic and Sheet Asphalt on Concrete Base, and Plain Concrete Paving.

Each proposal must be accompanied with a surety bond, certified check or money to the amount of five (5) per centum of the total amount of the proposal.

Performance of the contract shall commence within thirty calendar days after award of contract, and the entire work shall be completed by January 1, 1921.

The right is reserved to accept or reject any proposal and to waive defects.

Specifications and other information may be obtained from the undersigned after August 10, 1920.

F. C. WYSE, City Engineer.
M. M. RICE, Councilman.

Bids close August 23, 1920.

Street Paving

Dothan, Ala., July 30, 1920.
The City of Dothan will receive bids up until 5 o'clock August 23, 1920, for 8912 square yards of paving and 192 linear feet of stone headers, with brick, bitulithic, asphalt, wood blocks, vibrolithic and concrete.

Each bidder will be required to deposit a certified or cashier's check or New York exchange to the amount of 10 per cent. of the contract price.

Plans and specifications can be had by applying to R. W. Lisenby, City Clerk, Dothan, Ala., by depositing the sum of \$10, which will be refunded on return of same.

Reserving the right to reject any and all bids.

A. BLACK,
Chairman of the Street Committee.

Bids close August 18, 1920.

Repairing Roads**WATER DEPARTMENT.**

Baltimore, Md.
Sealed proposals, in duplicate, endorsed "Bid for Repairing Roads at Loch Raven," addressed to the Board of Awards of Baltimore City, will be received at the office of the City Register, City Hall, until Wednesday, August 18, 1920, 11 A. M., at which time they will be publicly opened and read.

Specifications and proposal forms may be obtained at the office of the Water Engineer, 3d floor, City Hall, Baltimore, Md., on and after August 7, 1920. A charge of \$5 will be made for each set of specifications. This amount will be refunded upon their return on or before August 25, 1920, in good condition. Specifications used in making a bid will be considered as returned.

All bids must be accompanied by a certified check of the bidder on a clearing-house bank for the sum of \$1000, payable to the order of the Mayor and City Council of Baltimore, and the successful bidder will be required to give satisfactory bond for the faithful performance of the agreement, equal in amount to the value of the contract.

The Board of Awards reserves the right to reject any or all bids.

WM. A. MEGRAW,
Water Engineer.

Approved:
WM. F. BROENING,
President Board of Awards.

Bids close August 20, 1920.

State Highway

Nashville, Tenn.
Sealed bids will be received by the Department of Highways, State of Tennessee, at Nashville, Tennessee, until 2 o'clock P. M. August 20, 1920, for the construction of 16.304 miles of State Highway No. 7 between the Davidson County line and Murfreesboro, in Rutherford County, Tennessee.

Bids will be opened publicly at 2 o'clock P. M.

The principal items of construction are approximately as follows:

22,082 cu. yds. Common Excavation.
2,123 cu. yds. Solid Rock Excavation.
4,901 cu. yds. Borrow.
9.19 cu. yds. Special Concrete.
192.38 cu. yds. Class "A" Concrete.
98.27 cu. yds. Class "B" Concrete.
17,955 pounds Deformed Steel Bars.

36 in. ft. 12" Culvert Pipe. } Fur-
248 in. ft. 15" Culvert Pipe. } nishing
120 in. ft. 18" Culvert Pipe. } and
270 in. ft. 24" Culvert Pipe. } Placing.

1,406 cu. yds. Overhaul.
40.98 cu. yds. Class "B" Con- }
crete. } Pipe
255 lbs. Deformed Steel Bars. } Culvert
157.40 cu. yds. Class "A" Con- } Endwalls.
crete. } Cul-
33 cu. yds. Class "B" Con- } vert, Unit
crete. } Con-

13,943 lbs. Deformed Steel Bars. } struction.
135,044 sq. yds. Reconstructed Base Course.
55,986 sq. yds. Broken Stone Base Course.

135,044 sq. yds. Broken Stone Base Course, "A".

191,311 sq. yds. Bituminous Macadam Penetration, or

191,311 sq. yds. Rock Asphalt Surface Course.

Plans and specifications are on file in the office of the Department of Highways, Nashville, Tennessee; also in the office of the County Court Clerk, Murfreesboro, Tennessee.

Any additional information may be secured from the Chief Engineer, Nashville, Tennessee.

The right to reject any or all bids is reserved.

Certified check for the sum of \$1500 must accompany each bid as evidence of good faith and as a guarantee that, if awarded contract, the bidder will execute contract and give bond as required.

Successful bidder will be required to furnish bond in an amount equal to 50 per cent. of the contract price of the work.

W. P. MOORE,
Chief Engineer.

Bids close August 19, 1920.

Road Improvement

Columbia, S. C.
Pursuant to the provisions of an Act of the General Assembly of South Carolina, creating the Richland County Permanent Roads Commission, approved March 5, 1920, notice is hereby given that sealed proposals for highway improvement in Richland County, in the State of South Carolina, will be received at the office of Richland County Permanent Roads Commission, 1202½ Main Street, Columbia, S. C., until 12 o'clock noon August 19, 1920, and then publicly opened.

DESCRIPTION OF WORK TO BE DONE.
The improvement of approximately five miles of the Two-Notch Road, consisting of the following:

7.54 acres of Clearing and Grubbing.
34,733.6 cubic yards of Common Earth Excavation.

120 lineal feet of 18-inch Vitriified Clay Pipe Culvert.

218 lineal feet of 24-inch Vitriified Clay Pipe Culvert.

140 lineal feet of 30-inch Vitriified Clay Pipe Culvert.

54.7 cubic yards of Class B Concrete for head walls.

2 Concrete Box Culverts, containing

117.4 cubic yards Class A concrete and 8135.2 pounds steel reinforcing.

46,089.8 square yards of Surfacing. (Alternate bids may be submitted on any or all of the following types: Cement Concrete; Asphaltic Concrete on Cement Concrete Base; Asphaltic Concrete on Roll Stone Base; Sheet Asphalt on Cement Concrete Base.)

Detailed plans for the work may be seen for examination at the office of the Commission, 1202½ Main Street, Columbia, S. C., and at the office of the State Highway Commission, Commercial Bank Building, Columbia, S. C. Complete set of plans will be furnished for \$5, which sum will be refunded if plans are returned in good condition.

The right is reserved to reject any or all

proposals and to waive any technicalities. A certified check for \$5000, made payable to the order of the Richland County Permanent Roads Commission, must accompany each proposal.

Proposals shall be submitted in sealed envelopes, marked "Bids on the Construction, Project No. 66-A, Two-Notch Road, in Richland County, S. C.," and only sealed bids will be considered.

Bids close August 14, 1920.

Road Construction

Charleston, W. Va.

Sealed proposals will be received by the County Clerk of Kanawha County at Charleston, West Virginia, until 10 A. M. on the 14th day of August, 1920, for the construction of the following roads in Cabin Creek District:

South Side Kanawha River, Loudon District line to Montgomery:

Section Number 3-3.7 miles.
Section Number 4-3.0 miles.

Section Number 5-3.6 miles.
Section Number 6-4.0 miles.

Hansford to Whittaker:
Section Number 8-4.0 miles.

Section Number 9-4.0 miles.
Section Number 10-2.6 miles.

Cabin Creek Junction to Leewood:
Section Number 11-3 miles.

Section Number 12-3 miles.
Section Number 13-3 miles.

Work is to consist of grading and masonry up to and including twenty (20) foot spans.

Plans, specifications and estimate of the quantities may be examined at the office of P. J. Walsh, Courthouse, Charleston, West Virginia, and at the office of the State Road Commission, Charleston, West Virginia.

Proposals will be received only upon State standard forms, which can be obtained from the undersigned or from the Division Engineer's office at Charleston, West Virginia.

All proposals must be accompanied by a certified check or draft for 5 per cent. of the estimated amount of the bids.

The right is reserved to reject any and all bids.

(Signed) L. C. MASSEY,
County Clerk.

Bids close August 16, 1920.

Street Paving and Sea Wall

Biloxi, Miss.

Sealed bids will be received by the Mayor and Commissioners of the City of Biloxi, Mississippi, until 2 P. M. August 16, 1920, for the construction of a seawall and shore protection along certain portions of the Beach Front and for approximately seven miles of street pavement as shown by the plans and map on file in the office of the City Clerk, when said bids will be publicly opened and read.

Each bid is to be addressed to the Mayor and Commissioners and to be accompanied by a certified check for an amount equal to at least 5 per cent. of the amount of the bid, said check to guarantee that if awarded the work the bidder will execute the contract and give bond therefor as required in the proposal.

Plans and specifications may be secured on or after July 26 from W. H. Hunt, Commissioner of Streets, Biloxi, Mississippi, or Massena L. Culley, Engineer, Jackson, Mississippi, by deposit of ten dollars for the Beach Front plans and fifteen dollars for Paving plans, said deposit to be returned on return of plans.

The city reserves the right to award the work by separate items or as a whole, and also the award for any type of pavement or Front protection as will afford the best contract and results.

Alternate plans are invited for the Beach Front protection conditioned on the same being accompanied by full detailed plans and specifications.

Right is reserved to reject any or all bids. All other rights reserved:

Item A—Storm Drains.
Item B—Grading.

Item C—Street Pavement.

(a) Bitulithic.
(b) Brick.

(c) Sheet Asphalt.
(d) Asphaltic Concrete, penetration.

(e) Asphaltic Concrete, mixed.
(f) Tarvia Macadam.

(i) Concrete Pavement.
Item E—Concrete Pavement on Beach.

Item F—Seawall or Protection.
Item G—Water Mains.

Item H—Sewer Connections.
CITY OF BILOXI,
W. H. HUNT,
Commissioner, Pub. Wks. Dept.

Bids close August 16 1920.

Pavement

Palestine, Texas.

Sealed proposals will be received at the office of O. C. Cutter, City Secretary, Palestine, Texas, until noon the 16th day of August, 1920, for the construction of about 100,000 square yards of pavement. Plans and specifications may be seen for examination, and information may be obtained at the office of the City Engineer.

A certified check or cashier's check for 5 per cent. of the amount bid and made payable without recourse to the order of A. L. Bowers, Mayor of the City of Palestine, Anderson County, Texas, must accompany each proposal as a guarantee that the bidder, if successful, will enter into contract and make bond in accordance with the requirements of the specifications.

The right is reserved by the City Council and Mayor of Palestine to accept or reject any and all proposals or to waive all technicalities. Proposals shall be submitted in sealed envelopes and marked "Bids for Paving."

All bids received will be retained by the city and will not be returned to the bidders.

A. L. BOWERS,
Mayor.

O. C. CUTTER,
City Secretary.

Bids close August 19, 1920.

Roads and Bridges

SOUTH CAROLINA STATE HIGHWAY DEPARTMENT.

NOTICE TO CONTRACTORS.

F. A. PROJECT NO. 80—WILLIAMSBURG COUNTY.

Kingstree, S. C.

Bids will be received at 12 o'clock noon Thursday, August 19, 1920, at the office of the Board of County Commissioners of Williamsburg County, Kingstree, S. C., for the construction of 8.504 miles of the Manning-Kingstree Road between Clarendon County line and Survey Station 18350, and bridges and sand-clay surfacing on the same road between Clarendon County line and Black River.

The road work consists of approximately 8.6 acres of clearing and grubbing, 43,090 cubic yards common excavation, 26,135 cubic yards sand-clay surfacing, 57.75 linear feet mixing and shaping sand-clay, 38.0 cubic yards Class "A" concrete in box culverts, 2587 pounds steel reinforcements, 94.2 cubic yards Class "B" concrete in headwalls and all the necessary pipe culverts.

The bridge work consists of 76,506 feet B. M. creosoted lumber, 31,331 pounds hardware, 4710 linear feet creosoted piles and 952 square yards bituminous wearing surface.

Proposals must be accompanied by certified checks for Five Hundred Dollars (\$500), made payable to the Chairman of the Board of County Commissioners of Williamsburg County. The work may be bid on as a whole or separately. If the work is bid on as a whole, only one check will be required.

Plans, specifications and proposal forms are on file at the office of J. M. Martin, County Engineer, Kingstree, S. C., and at the office of W. S. Lewis, Division Engineer, Florence, S. C.; also at the office of the State Highway Engineer, Columbia, S. C. Plans and specifications may be obtained at the latter address upon a request accompanied by check for Five Dollars (\$5), which will be refunded when same are returned in good condition within thirty (30) days after date of letting.

Bids close August 17, 1920.

Freight Shed Extension

New Orleans, La.

Sealed proposals will be received by the Board of Commissioners of the Port of New Orleans at their office, Suite 200 New Orleans Court Building, until 8 o'clock P. M. August 17, and then publicly opened, for the furnishing or for the furnishing and erecting of all the structural steel required for the "Pauline Street Freight Shed Extension."

A deposit of \$500 in cash or certified check is required with proposal.

Bond of \$15,000 is required with notarial contract.

Payments: 75 per cent. of the bid for material will be paid upon delivery and acceptance of same on the site. The balance will be paid upon completion of erection.

Plans and specifications are on file in the office of the Chief Engineer, Arsene Perillat, by whom full sets will be furnished to prospective bidders on deposit of \$10, which will be refunded to depositors who submit proposals and return set in good condition.

The right is reserved to reject any and all bids and to waive informalities.

W. O. HUDSON,
President.

Bids close August 25, 1920.

State Highway BridgeN. C. FEDERAL-AID PROJECT No. 116.
Greensboro, N. C.

Sealed bids for the construction of a Reinforced Concrete Bridge over the Yadkin River between Montgomery and Stanly Counties, N. C., consisting of three Open Spandrel Ribbed Arches of 146' 3" span, and fourteen Deck Girder Approach Spans of forty feet each, will be received by the North Carolina State Highway Commission at the Division Office in Greensboro, N. C., until 12 o'clock M. on the 25th day of August, 1920, when they will be opened and read.

No bids will be received after the hour fixed.

The work will consist approximately as follows:

2,158 cu. yds. Class "A" Concrete.
1,826 cu. yds. Class "B" Concrete.
362,190 lbs. Reinforcing Steel.
10,470 lbs. Plates and Bolts.

2 Name Plates.

No bids will be considered unless accompanied by a corporate surety bond or by a properly certified check for Eight Thousand (\$8000) Dollars, made payable to Frank Page, Chairman.

A corporate surety bond or other satisfactory security will be required for the complete fulfillment of the contract.

Specifications, forms of contract, proposal blanks, etc., can be obtained by writing to the office of the State Highway Commission, Raleigh, N. C.

Plans may be seen in the office of the Division Engineer at Greensboro, N. C., or in the office of the Bridge Engineer at Raleigh, N. C.

Any increase in freight rates made public after date of letting and paid by contractor will be allowed if proper vouchers are submitted at the time of payment of such increased rates.

The right is reserved to reject any or all bids or to accept any bid deemed best for the State and the County.

By order of the North Carolina State Highway Commission.

This 31st day of July, 1920.

W. S. FALLIS,
State Highway Engineer.

Bids close August 20, 1920.

Canal Excavation and Bridges

Clinton, Ky.
The Board of Drainage Commissioners of Hickman County, Kentucky, will receive bids until 10 o'clock A. M. August 20, 1920, for the following:

The excavation of one main canal, aggregating 48,200 feet in length, and three laterals, aggregating 3300 feet in length, all aggregating 291,738 cubic yards of excavation.

Five wooden bridges across the said ditch on public roads crossing the same. All in Brush Creek Drainage District, in Hickman and Graves counties, Kentucky.

Bids on excavation will include the clearing of the right-of-way for the said ditch, which amounts to about 20 per cent. of the whole right-of-way.

Separate bids on the above work of excavation and building of bridges will be acceptable.

Plans and specifications may be seen at the office of the Board of Drainage Commissioners of Hickman County, Clinton, Ky., or by application to the undersigned.

Bids must be accompanied by certified check for \$1000.

Bonds have been sold.

Commissioners reserve the right to reject any and all bids.

H. M. CRESAP,
President of the Board.
J. A. PORTER,
Engineer.

Bids close September 7, 1920.

Steel Beam Bridge

Quitman, Miss.
Clarke County Supervisors, W. B. Raley, Clerk, will erect steel beam bridge over Pachuta Creek, three miles east of Pachuta. Sealed bids until 2 o'clock P. M. September 7, 1920.

Bids close August 17, 1920.

Wharf Extension

New Orleans, La.
Sealed proposals will be received by the Board of Commissioners of the Port of New Orleans at their office, Suite 200 New Orleans Court Building, until 8 o'clock P. M. August 17, 1920, and then publicly opened, for the constructing and furnishing of all material

and labor for the "Pauline Street Freight Wharf Extension."

A deposit of \$500 in cash or certified check is required with proposal.

Bond of \$20,000 is required with notarial contract.

Payments: Contractor financed by the Board. Payments semi-monthly on labor rolls and for material on presentation of invoices.

Contract: The contract is an especial form of "Economy Contract."

Plans and specifications are on file in the office of the Chief Engineer, Arsene Perillat, by whom full sets will be furnished to prospective bidders on deposit of \$10, which will be refunded to depositors who submit proposals and return set in good condition.

The right is reserved to reject any and all bids and to waive informalities.

W. O. HUDSON,
President.

Bids close August 20, 1920.

Grading and Drainage Structures

Nashville, Tenn.
Sealed bids will be received by the Department of Highways, State of Tennessee, at Nashville, Tennessee, until 2 o'clock P. M. August 20, 1920, for the Grading and Drainage Structures complete on 9.94 miles of State Highway No. 3, between the Cheatham County line and Burns, in Dickson County, Tennessee.

Bids will be opened publicly at 2 o'clock P. M.

The principal items of construction are approximately as follows:

57,471 cu. yds. Common Excavation.

8,065 cu. yds. Borrow.

43,24 cu. yds. Class "A" Concrete.

3,843 lbs. Deformed Steel Bars.

2 lin. ft. 12" Pipe Culverts.

78 lin. ft. 15" Pipe Culverts.

86 lin. ft. 18" Pipe Culverts.

118 lin. ft. 24" Pipe Culverts.

134 lin. ft. 30" Pipe Culverts.

3,545 lin. ft. Wooden Railing.

63,26 cu. yds. Class "B" Concrete.

352 lbs. Deformed Steel Bars.

25,18 cu. yds. Class "A" Concrete.

1,83 cu. yds. Class "B" Concrete.

1,884 lbs. Deformed Steel Bars.

Plans and specifications are on file in the office of the Department of Highways, Nashville, Tennessee; also in the office of the County Court Clerk, Charlotte, Tennessee.

Any additional information may be secured from the Chief Engineer, Nashville, Tennessee.

The right to reject any or all bids is reserved.

Certified check for the sum of \$1500 must accompany each bid as evidence of good faith and as a guarantee that, if awarded contract, the bidder will execute contract and give bond as required.

Successful bidder will be required to furnish bond in an amount equal to 50 per cent. of the contract price of the work.

W. P. MOORE,Chief Engineer.

Bids close August 20, 1920.

Grading and Drainage Structures

Nashville, Tenn.
Sealed bids will be received by the Department of Highways, State of Tennessee, until 2 o'clock P. M. August 20, 1920, for the grading and drainage structures under twenty-foot span on 14.54 miles of State Highway No. 36 between McKenzie, in Carroll County, and Dresden, in Weakley County, Tennessee.

Bids will be opened publicly at 2 o'clock P. M.

The principal items of construction are approximately as follows:

84,120 cu. yds. Common Excavation.

45,059 cu. yds. Borrow.

315 cu. yds. Overhaul.

283 cu. yds. Class "A" Concrete.

270 cu. yds. Class "B" Concrete.

46,700 pounds Deformed Steel Bars.

584 lin. ft. 15" Culvert Pipe.

510 lin. ft. 18" Culvert Pipe.

356 lin. ft. 24" Culvert Pipe.

79.5 cu. yds. Class "B" Concrete.

360 lbs. Deformed Steel Bars.

1000 feet Guard Rail.

Plans and specifications are on file in the office of the Department of Highways, Nashville, Tennessee; also in the office of the County Court Clerk, Dresden, Tennessee.

Any additional information may be secured

from the Chief Engineer, Nashville, Tennessee.

The right to reject any or all bids is reserved.

Certified check for the sum of \$1500 must accompany each bid as evidence of good faith and as a guarantee that, if awarded contract, the bidder will execute contract and give bond as required.

Successful bidder will be required to furnish bond in an amount equal to 50 per cent. of the contract price of the work.

W. P. MOORE,
Chief Engineer.

Bids close September 1, 1920.

Street, Water and Sewer Extensions

Wilson, N. C.
Sealed proposals will be received for the materials and labor in connection with the improvement of certain streets, the extension of water mains and sanitary sewers in the Town of Wilson, N. C., by the Mayor and Board of Commissioners of said Town, until 2:30 o'clock P. M. of Wednesday, September 1, 1920, when they will be opened and publicly read. Contract will be made dependent upon the sale of bonds.

The work will consist of the following approximate quantities:

75,000 square yards of asphaltic pavement. (Bids will be asked on sheet asphalt, bitulithic and "Topeka" pavements.)

75,000 square yards of 5-inch concrete base.

17,000 cubic yards of excavation.

42,000 linear feet of sanitary and storm sewers.

110 manholes.

200 catchbasins.

46,500 linear feet of concrete curb and gutter.

13,700 linear feet of 6-inch Class B water mains.

The Town reserves the right to use any of the above types of pavement for the whole or any part of the work.

Plans and specifications may be examined at the office of the Engineers or the office of the Town Clerk. Specifications are ready for delivery, and the prospective bidders may obtain same by addressing direct to the Engineers at Wilson, N. C., and making a deposit of \$10, which will be refunded upon the return of the specifications in good condition.

Each proposal must be accompanied by a certified check in the sum of five (5) per cent. of the amount bid, as evidence of good faith upon the part of the bidder.

The Town reserves the right to reject any or all bids or to accept any which may seem to it to be the best interest to the Town of Wilson.

D. H. HILL, Mayor.

L. J. HERRING, Chairman.

T. A. HINNANT, Clerk.

GLADDING, MORRISON & OTT,
Municipal Engineers,
Wilson, N. C.

Bids close September 6, 1920.

Courthouse

Tunica, Miss.
The Board of Supervisors of Tunica County, Mississippi, will receive bids for the construction of a Courthouse for said County until 1 o'clock P. M. Monday, September 6, 1920, at which time all bids received will be opened and considered at the regular September, 1920, meeting of said Board.

Separate bids will also be received on plumbing, electric wiring, heating, electric fixtures, clock and other items, as directed by the architects of the Board, according to the plans and specifications now on file with the Clerk of the Chancery Court of said County.

Each bid must be accompanied by a certified check in the sum of \$1000 to secure compliance with bid. Bond in 100 per cent. of contract price will be required.

Contract will be awarded the lowest bidder. The Board of Supervisors reserves the right to reject any or all bids.

Plans and specifications are on file in the office of the Chancery Clerk of Tunica County, Miss., and will be issued from the office of Frank P. Gates Company, Architects and Engineers, Clarksdale, Miss. A deposit of \$10 is required on receipt of plans and specifications, to be returned when said plans and specifications are returned to the Architect's office.

Witness my signature and seal of office, this 5th day of August, 1920.

L. C. SHANNON,
Chancery Clerk.

August 12, 1920.
Manufacturers Record.

PROPOSALS

161

Bids close August 17, 1920.

Courthouse Improvement

Sumter, S. C., July 30, 1920.
Sealed proposals will be received at the office of the County Board of Commissioners of Sumter County, Sumter, S. C., before noon of August 17, for alterations and additions to the Sumter County Courthouse.

Specifications are on file at the office of the Board, or may be had at the office of the Architects, Johnson & Deal, 11½ S. Main St., Sumter, S. C. Each bid must be accompanied by a certified check of 5 per cent. of proposal.

Bids close September 1, 1920.

Lodge Building

Tallahassee, Fla.

Bids will be received for the erection of a building on the vacant lot south and west of the present Masonic building. Bids received by the Secretary of the Board of Trustees up to September 1, 1920, 10 o'clock A. M. Certified check for 5 per cent. of cost of building to accompany all bids. Board reserves the right to reject any or all bids. Plans and

specifications to be seen at the office of W. L. Marshall, Chairman of Board.

W. F. QUAILE,
Secretary of Board.

Bids close August 18, 1920.

Painting Stand Pipes

Baltimore, Md.

Sealed proposals in duplicate, endorsed "Bid for Painting Standpipes," addressed to the Board of Awards of Baltimore City, will be received at the office of the City Register, City Hall, until Wednesday, August 18, 1920, 11 A. M., at which time they will be publicly opened and read.

Specifications and proposal forms may be obtained at the office of the Water Engineer, 3d floor, City Hall, Baltimore, Md., on and after August 7, 1920. A charge of \$5 will be made for each set of specifications. This amount will be refunded upon their return on or before August 25, 1920, in good condition. Specifications used in making a bid will be considered as returned.

All bids must be accompanied by a certified check of the bidder on a clearing-house bank for the sum of \$200, payable to the order of the Mayor and City Council of Baltimore.

and the successful bidder will be required to give satisfactory bond for the faithful performance of the agreement equal in amount to the value of the contract.
The Board of Awards reserves the right to reject any or all bids.

WM. A. MEGRAW,
Water Engineer.

Approved:

WM. F. BROENING,
President Board of Awards.

Bids close August 16, 1920.

Storm Sewers

Bennettsville, S. C.

Sealed bids will be received by the Town Council, Bennettsville, S. C., up to 4 P. M. Monday, August 16, 1920, for the construction of approximately three-quarters of a mile of storm sewers.

Plans and specifications may be seen at the office of the Engineer, and specifications will be furnished upon application to the Mayor or Engineer.

T. C. CROSSLAND,
Mayor Bennettsville, S. C.
HARWOOD BEEBE, Engineer,
Spartanburg, S. C.



MINERAL AND TIMBER LANDS, WATER POWERS, MISCELLANEOUS PROPERTIES

SPECIAL GROUND-FLOOR OPPORTUNITIES

For company with capital to establish saw-mills and large lumbering industries in Panama, near canal, on deep-water transportation. Have large annual cash contracts to buy outputs. Quick action required.

OIL SPECULATORS.
We have a million acres proven oil lands in Southwest Texas, Southeast Kentucky and Southwest Virginia. We will sell at sacrifice large acreages or consider fifty-fifty drilling contract. We have several going coal mines, silver mines, zinc mines and saw-milling plants for sale at a sacrifice. Write for details.

WEAL SYNDICATE, INC.,
211 Curry Bldg.,
Tampa, Fla.

FOR SALE—Located in Virginia, 220,000 acres hardwood timber land in fee, estimated to cut ten thousand feet per acre average; 50% white and chestnut oak, 15% yellow poplar, balance walnut, hickory and ash. Land underlain with five good seams of coal; large quantities of iron ore, with good prospects for oil. One railroad crosses property, another within three miles. Deal with owner. Price \$15 per acre. Terms may be arranged. W. R. Power, 829 City Bank Bldg., Mobile, Ala.

FOR SALE—80 acres developed zinc mine, equipped with mill; also timber lands; improved commercial orchards in Northwest Arkansas fruit belt; stock and grain farms. Fredericks Realty Co., Springdale, Ark.

LARGE bodies of iron-ore, pyrites, gold and copper lands for sale on easy terms; mineral lands of all kinds, etc. Send for catalogue of farms and mineral lands. Emmer D. Gregory, First National Bank Bldg., Billwyn, Va.

CLAY PROPERTIES

FOR SALE—FINE TRACT OF CLAY. Makes exceptionally fine brick. Located on N. S. R. R., near Newbern, N. C. Also have 10,000 cords standing timber on adjoining property. Thos. B. Hammer, Philadelphia, Pa.

IRON ORE

FOR SALE—Large tonnage very rich iron ore; easily mined; close to transportation. C. G. Samuel, Charleston, Tennessee.

COAL LANDS AND MINES

FOR SALE—Undeveloped coal tracts in Somerset County, Pennsylvania. Principals only. Leo. A. Neubecker, Box 596, Buffalo, N. Y.

RATES AND CONDITIONS

Rate 30 cents per line per insertion. Minimum space accepted, four lines. In estimating the cost, allow seven words of ordinary length to a line. When the advertisement contains a number of long words, proper allowance should be made. Terms: Invariably cash with order; check, postoffice or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assistance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, oil or mining stock advertisements accepted. Rate for special contracts covering space used as desired within one year as follows: 100 lines, 25c. per line; 200 lines, 26c. per line; 500 lines or more, 25c. per line.

COAL LANDS AND MINES

FOR SALE—Sixteen thousand acres, located in West Virginia; N. & W. Ry.; 5 seams of coal running from 45 inches to 68 inches, among them the Warfield seam and the Winfield seam. Price and terms very liberal. All information regarding the same will be furnished by T. J. Ewing, Box 443, Catlettsburg, Ky.

I MAKE A SPECIALTY of leases, royalties, production, coal and timber lands and fluorspar properties in Kentucky. Have a fine tract of timber, with mills, etc. Also handle leases in Texas and Louisiana. E. D. Watkins, Oil Producer, Irvine, Ky.

FOR SALE—2500 acres unimproved coal land in tracts, \$25 per acre; has several seams; top drift; adjacent railroad, mines, gas and oil. Cavanagh, McAlester, Oklahoma.

COAL AND TIMBER LAND

COAL AND TIMBER LANDS.

Cumberland County, Tennessee: to close estate; titles good; 70,000 acres in tracts of 2000 to 20,000 acres. E. H. Benoist, 1002 Tenth Guaranty Bldg., St. Louis, Missouri.

FOR SALE—Several valuable tracts of coal lands and two operating mines in West Virginia at reasonable prices and terms to suitable parties. Edw. L. Reed, Box 867, Pittsburgh, Pa.

1300 ACRES in one tract, chestnut-oak, white oak and poplar timber, for sale. Three workable veins of coal peculiar to the Hazard District for lease. Minimum royalties and all privileges. Arthur L. Ware, Hazard, Ky.

TIMBER LANDS WANTED

WANTED—Large tracts of timber lands in North and South Carolina and Georgia, either hard or soft wood. Have several clients for such tracts and am receiving inquiries daily. Prefer tracts direct from owners. Write R. Maury Young, Mechanics' Bldg., Petersburg, Va.

WANTED—Timber lands and income properties. Any size, anywhere. Write Chas. A. Philidus, 510 East 120th Street, New York.

TIMBER LAND

24,000 acres of good oak timber for sale at a bargain; in one tract; fertile land, well watered; splendid investment. Thomas W. Watson, St. Charles, Mo.

TIMBER OPERATION

TIMBER AND ACTIVE MILL FOR SALE. 70,000,000 ft. virgin short-leaf yellow pine timber. Fast-cutting Clark band mill now in operation actually cutting 25,000 ft. boards or 50,000 ft. 2-in. dimension per day. Entire plant rebuilt this year. Has Moore drykilns and plenty of steam. Complete logging equipment now in operation, including mills, carts, two skidders, three locomotives, 23 log cars, 15 miles rail. Logs 16 ft. average 85 ft. scale. Have 30,000 logs ahead of mill. Labor good and plentiful. Our own transportation facilities of two seagoing barges and one towing and freight steamer. Located in South Carolina. Everything in bang-up condition, and running with full crews. Box 337, Wilmington, N. C.

TIMBER

FOR SALE—1400 acres of sawmill timber; will cut 50,000,000 feet and 15,000 cross-ties, 2 sawmills, 25,000 to 30,000 capacity; 14 miles of railroad. Located on railroad, about 20 miles from Jacksonville. Shingle, lath mills, etc.; 3 locomotives, entire timber and equipment. Price \$300,000. J. G. Davis, Room 50 Mutual Life Bldg., Jacksonville, Fla.

LATH AND TOBACCO STAVE TIMBER. FOR SALE—10,000 to 15,000 cords standing timber on N. S. R. R., near Newbern, N. C. Will sell by the cord with cash advance. Fine opportunity for laths or tobacco stave factories. Thos. B. Hammer, Philadelphia, Pa.

TIMBER FOR SALE.—4900 acres timber rights, with 17 years for cutting. Estimated to contain 52 million feet; 10 per cent. cypress, 10 per cent. yellow poplar, 20 per cent. gum, 60 per cent. pine. Located on Southern Railway at Springfield, S. C. Easy terms to reliable operator. W. L. Clement, Trustee, 601 Magnolia St., Greensboro, N. C.

IF YOU are in the market for good pine timber, well located in North Carolina, communicate with James & James, Inc., Southern Building, Wilmington, N. C.

LUMBER

LUMBER, LATH AND SHINGLES.

Dressed stock, framing in mixed cars or housebills at 25% under your local prices. Let me quote you on your needs.
Stuart R. Greiner, Inc.,
Perry, Florida.

FARM AND TIMBER LAND

WRITE for free Mississippi map and list of improved black land farms. Also wholesale cut-over and timber tracts for sale. Southern Land & Timber Co., Box 843, Meridian, Miss.

FRUIT, FARM AND TRUCK LANDS

DISTRICT OF COLUMBIA
GENTLEMAN'S COUNTRY
ESTATE BARGAIN.

Beautiful colonial center-hall type house. First floor—Living-room, music-room, library, dining-room, butler's pantry, kitchen and extra lavatory. Second floor—Five master bedrooms, two tiled baths. Third floor—Three bedrooms and bath. Six open fireplaces; large double porches on two sides; hot-water heat; hardwood floors; gas; electricity; 10 acres; lawn; tennis courts; rose garden; kitchen garden; garage for three cars; chauffeur's quarters; stable; chicken-house; carriage-house; 100 fruit trees; grape arbor; wonderful trees and shrubbery, hedges. Thirty minutes to Treasury by trolley; 20 minutes by automobile over macadam roads.

Liberal terms if desired.
Will consider an exchange.
O. B. ZANTZINGER,
Washington, D. C.

FLORIDA

FOR SALE—38 acres within corporate limits of good town; 25 acres in cultivation; 4-room dwelling, barns, good water, there being boiling spring on place as cool and clear as Blue Ridge Mountain springs; one-half mile to school and churches of three denominations in nice little town; fine place for poultry or truck, being so near to station, and is cheap at the price of \$2500; half down; balance to suit purchaser. J. H. Williams, Johnstown, Fla.

FOR SALE—4500-acre cattle ranch; bordering two large lakes; fully stocked. If interested, see Orange County Land Co., Orlando, Fla.

SUGAR AND RICE LANDS in Cape Sable region, Florida. Two crops of rice a year. W. W. Dewhurst, St. Augustine, Fla.

FOR SALE—247,000 acres Florida land in solid body, close to market and shipping port; suitable for general farming, stock ranches, sugar cane, etc. Railroad through track. For price and terms address G. E. Gage, 16 Browning Road, Somerville, Mass.

GEORGIA

LOWNDES COUNTY TOBACCO LANDS.

Investigation will prove to you that the lands of Lowndes county produce the very finest grade of tobacco. Our lands are all in large bodies. Have you the money to invest, with vision to see what immense profits will be made by buying these tracts and cutting them up into smaller farms? Get in on the ground floor while the price is low and get the advantage of the big boost in prices that will surely come. Write me how much you can invest and let me tell you about some of the tracts I have listed. J. J. Newman, 106 Valley Street, Valdosta, Ga.

STOCK RANCH FOR SALE.

We have for sale twenty-four thousand acres of fine stock range that, owing to its location, can be completely fenced with less than ten miles of wire. This land is cheap, and it is only a question a short time before it will be developed into farms. If you want a real cattle location, investigate this at once. You could not invest your money at a better advantage should you buy this and simply hold for development. Six dollars per acre will buy it if it can be sold at once. J. J. Newman, Valdosta, Georgia.

LOUISIANA

MARS HILANDS.—I have for sale probably the largest acreage of marsh lands in Southern and Southwest Louisiana that can be bought at prices ranging from \$3 to \$5 per acre. These lands can be reclaimed, and when so reclaimed are very valuable; besides, many people think these marsh lands of Southwest Louisiana within the oil belt. For further information address J. A. Bardwell, Lake Charles, La.

MARYLAND

MARYLAND FARMS.—Water-front estates, homes, farms and game preserves on the Eastern and Western Shore of the Chesapeake Bay and its tributaries; timber tracts, stock, dairy, truck, poultry and fruit farms. Catalogue representing 21 counties upon request. Chas. H. Heintzeman, Real Estate Broker, 922 South Charles St., Baltimore, Md.

MISSOURI

500-acre stock and grain farm, 34 miles west of St. Louis city limits, on National Highway; good buildings; very fertile land. Thomas W. Watson, St. Charles, Mo.

NORTH CAROLINA

VIRGIN LAND FOR SALE.—Especially suited for tobacco, cotton, corn or any other crop that grows, located in the richest land section in the world at the lowest price per acre. This section put North Carolina on the map last year on account of its wonderful crops, making in many instances as high as \$1000 per acre in tobacco. Can furnish in lots of 100 acres up, ready for clearing. Write to Broadus & Ives Lumber Co., New Bern, N. C.

SOUTH CAROLINA

A PLACE IN THE SUN.

Can be pastured twelve months in the year by planting a winter crop. 2400 acres; the best sheep ranch south of Idaho, five miles from Winnsboro, S. C., in the Wateree hills; 250 acres of bottom land. Price \$20 per acre. Will grow clover or alfalfa on every acre. 26 miles north of Columbia, S. C.

A highly-improved farm in Orangeburg Co., S. C. 404 acres, six-room dwelling, water, lights, sewerage, nine tenant-houses, two barns, system ginny and power; 200 acres under mesh wire. Entire place tile drained. All farming tools, tractors, wagons, mules. Herd of registered Angus cattle, headed by Imboden of national reputation. For further particulars address W. J. Elliott, Palmetto Bldg., Columbia, S. C.

TEXAS

TEXAS RANCH.

240,000 acres in solid body; 90 per cent. suitable for agricultural purposes; well located; an abundance of good water; fine colonization proposition. Price, \$12.50 per acre. Good terms. We are instructed to deal only with parties able to buy.

UNITED STATES LOAN & INVESTMENT COMPANY.
PRAETORIAN BLDG.,
WACO, TEXAS.

VIRGINIA

FOR SALE—Small farm at Montvale, Va., 400 yds. from station; convenient to Roanoke and Lynchburg. 37 acres; good 7-room house, tobacco barn, stable, chicken and other out-houses; best water in the county and young orchard. Apply Box 470, Bluefield, W. Va.

VIRGINIA FARMS FOR SALE.

No. 20-V-1.
2230 acres; magnificent old colonial estate; 14-room mansion, Gothic library, Italian marble front porch, conservatory, with numerous outbuildings and tenants' homes; over 5,196,000 feet of timber. Splendid farming and stock-raising property and one of the few old Virginia estates now available. Owner is non-resident. Price and terms on application. Timber worth \$50,000.

No. 64-V-7.
682-acre dairy farm, located 1 1/4 miles from C. & O. station; 8 rooms, 2-story, frame house, large dairy barn with 32 steel stanchions, concrete floor, Delco-light room, refrigerator and 2 silos, all in first-class condition; deep artesian well; all buildings piped for water; located on elevated point overlooking entire farm, with beautiful oak grove surrounding the house, on main county highway within 25 miles of Richmond. This property can be bought for less than it would cost to construct the buildings. Reasonable cash payment and balance on 5 and 10 years' time. American Realty Exchange, Times-Dispatch Building, Richmond, Va.

VIRGINIA

HIGHLY IMPROVED FARM.—Just outside of good town on one of the leading highways, short distance of excellent high school, churches and market; in other words, an ideal suburban farm, now under intense cultivation, with a registered herd of Berkshire hogs. Most of farm fenced and cross-fenced with new woven wire, all open land improved, young orchard in bearing, good buildings, with new modern barn, and well watered. This is one of the best improved farms in this section and an excellent opportunity for a farm, with the best location and immediate results, 100 acres, about two-thirds clear. No need to answer if desiring a cheap farm. Address Owner, Box 67, Clarksville, Va.

5000-ACRE RANCH.—1800 feet elevation; invigorating, healthy climate; no malaria; no mosquitoes; \$7000 new residence, commanding 50-mile view of fertile Shenandoah Valley in foothills of Blue Ridge Mountains, Virginia; surrounded by profitable commercial orchards; the home of red winter apples. About 3000 acres choice orchard land; 30 acres set to vines, 3 years. Price \$25,000. Would consider residential grapefruit grove of equal value. H. W. Bennett, 35 Wall St., New York.

WELL DRILLING

WATER WELLS.—We contract well-drilling upon any specification. Write us fully what your requirements are and how you wish to contract. Then we shall be glad to submit you a proposition. Gray Artesian Well Company, Pensacola, Fla.

GRADING CONTRACTS WANTED

GRADING CONTRACTS WANTED. 50,000 cubic yards or more, for 15-team Wheeler outfit, or will rent same with complete organization. Address Contractor, 63 Knickerbocker Bldg., Baltimore, Md.

INCORPORATING COMPANIES

INCORPORATE under the liberal laws of Maryland; \$100,000 charter stock certificates, minute book, and also details of complete organization handled by experts for \$63. The Corporation Company, Department C, Box 440, Baltimore, Md.

FINANCIAL

"THE FAILURE OF and the Betrayal of the People" in the Federal Reserve Act. Popular edition, 25 cents. The Monetary Educational Bureau, 1416 F St., Wash., D. C.

We make a specialty of SOUTHERN COTTON-MILL STOCKS and can give you the benefit of twenty-three years' experience in this field, if you care to buy or sell.

F. C. ABBOTT & COMPANY,
Trust Building, Charlotte, N. C.

BUSINESS OPPORTUNITIES

ONLY ONCE IN LIFE DOES EYEBALL PROPERTY CHANGE HANDS.

WILL SELL OR LEASE for 99 years our river lot, 52 1/2 x 780 ft., in the pupil of the eyeball of Jacksonville's business district. Lot is only a few rods from all leading banks, leading hotels, leading department stores. Lot faces on Bay St., at Hogan. Ships plying to and from any port in the world can load and unload on this lot. Jacksonville is on the line of direction between South and North America. For an export business there is no better located lot in all America. Jacksonville, Fla., will be America's greatest port—mark those words. No State has Florida's future. Watch the census. Were I a young man, this ad. would not appear. W. E. Wimpy, Halliburton Hall, Clarkston, Ga.

SERVICES OFFERED in sale or exchange of real estate, farm and city property. Lumber, timber and orchard lands, mining and business propositions. Any realty transaction of the larger sort in Washington or adjacent States solicited. Special facilities for negotiating loans and making safe deed of trust investments.

Write me about your real estate investment problems. Confidential when desired. Formerly real estate appraiser for Federal Farm Loan Board, Treasury Department. Bank references. Marshall McKibbin, Woodward Building, Washington, D. C.